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A Guide to

FEB 28 1938
U. S. Department of Agriculture

BETTER GARDENS

DIAMOND QUALITY

PORTLAND SEED COMPANY

PORTLAND SEED COMPANY

109 S. E. Alder Street
Portland, Oregon

LET NAPHTHALENE FLAKES PROTECT YOUR GARDEN AND FARM CROPS

Naphthalene flakes are most commonly used for repelling soil pests such as wire worms, maggots, moles, snails and certain other insects. It can be used without burning or flavoring even the most tender root crops. It is highly recommended by bulb growers for protection against thrips, white fly and certain other stinging insects.

USE WHEN SEEDING

Tests show that the greatest success is derived from Naphthalene if it is worked into the trenches at the time of planting seed. The repellent in Naphthalene is the continual gas it gives off when moistened; this gas is neither harmful to humans or pets. If the material is placed on top of the ground it will soon evaporate without giving its fullest protection.

WITH BULBS

Naphthalene should be worked into the ground at the time of planting bulbs, Gladiolas, Tulips, Daffodils, etc. It is in no way harmful and will offer protection against soil pests. At the time of storing, Naphthalene should be sprinkled over the dry bulbs as a repellent to thrips and white fly.

FOR FARM USE

For farm use Naphthalene should be mixed with equal parts of dry earth, sand or fertilizer and distributed over the soil at the rate of 400 pounds of straight Naphthalene to the acre. Crossed disced and harrowed in thoroughly and deeply as possible. This is equal to ten pounds to 100 square yards. For killing wire worms the amount of Naphthalene should be doubled.

Naphthalene Flakes are sold by all leading seed and garden stores. For further information see your local dealer or write to the Portland Seed Company Portland, Oregon

"IT GUARDS YOUR GARDEN"

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PETUNIA SALMON SUPREME

Our All American Selections

SALMON SUPREME PETUNIA: This lovely flower was awarded the highest All-American Award for the season of 1938 and is truly one of the finest bedding plants yet offered to our many garden lovers.

It is an entirely new Petunia color, a color long wanted in the Petunia field. The blossoms, when first opening are of a rich coral salmon, changing as they mature to a glistening soft salmon pink. The blooms grow about two inches across and are very deeply five-lobed. The plants have a uniform height of about one foot and a spread of about one and one-half feet. They present a very tidy appearance and have a nicely rounded form which is retained throughout the entire season. A profuse branching habit and unusually hearty bloomer. Pkt. **35c.**

MARIGOLD, GOLDEN WEST: This marigold was awarded All-American Special Mention for the 1938 season.

This new variety of Marigold is earlier than most types. Larger blossoms yet a more dwarf and more prolific bloomer than the very popular Guinea Gold Marigold. The plants grow to a height of about two and one-half feet and branch very freely from near the base. The stems are long and graceful. The blossoms are uniform, fully double and exceedingly bright orange in color, about three and one-half inches in diameter. Blooming about fifteen weeks. Pkt. **25c.**

MARIGOLD, SUNSET GIANT: These lovely Marigolds have the outstanding characteristics of being very showy, fragrant and exceptional in size. Not only are the flowers the largest ever known in the Marigold group, averaging five inches, but they are produced in such profusion that a plant of Sunset Giants is one of the showiest spots in any garden. This lovely variety of Marigold is also free of any unpleasant odor so common in most varieties of the flower.

The flowers are loosely formed, very full centered, with broad, heavy petals gracefully overlapping to make a flower of great depth and even larger than Dahlia Flowered Zinnias. Sunset Giants is a mixture ranging from deep orange through golden orange, deep golden yellow, light yellow, lemon yellow and a delightful new shade of primrose. Pkt. **25c.**

CALENDULA, ORANGE FANTASY: The All-American Award of Merit for the season of 1938 was given to this striking flower because of its exceeding beauty and hardy growing habits.

The outer petals are long, while the inner petals are short curled and interlaced to form a heavy crest which surrounds a large mahogany bronze center. The flowers grow about three and three quarters inches across and are of a deep but pleasing bronze or copper orange with petals edged deep mahogany red. The entire plant grows to a height of about fifteen inches. Pkt. **25c.**

PANSY, CORONATION GOLD: Given the All-American Award of Merit for 1938. One of the finest pansies that we have ever offered.

This lovely Pansy has a large yellow blossom that is comparable with the Roggli Swiss Giant. The blooms are about three inches across and are a beautiful canary yellow with lower petals flushed golden orange. The flowers are round with lightly ruffled edges and a few strikingly showy rays of lighter yellow. Pkt. **25c.**

CALLIOPSIS, GOLDEN CREST: Award of Merit given by the All-American Board for the season of 1938.

This lovely new flower is a rich golden yellow with a reddish brown zone. It is a big improvement over the old Golden Wave which has been so very popular in the past. The blossoms of this fine new Calliopsis are about three inches across and have a double row of mammoth petals. We believe that this beautiful new flower will add greatly to any flower garden. Pkt. **25c.**

ZINNIA, NAVAJO: This is the only Zinnia announced in the 1938 All-American Selections and is certainly a fine addition to the ever popular Zinnia.

The plants grow to a height of about one and one-half feet and the blooms are medium size, double and semi-double with long narrow, incurved or fluted petals. The outer one-third of each petal is heavily tipped with a lighter contrasting color which gives it a very lovely effect. Pkt. **25c.**

ASTER, ENCHANTRESS: This lovely Aster received Special Mention by the All-American Board and is truly one of the finest Wilt Resistant varieties ever offered.

This variety offers an entirely new color in Asters. A luscious shade of lively Salmon Rose, distinct from all other colors yet developed. Both florists and home gardeners will be delighted with it. The blossoms are large and graceful. The plants are free flowering, branching and wilt resistant. They will bloom until early September. Pkt. **25c.**

ASTER CREGO ENCHANTRESS—368

SWEET PEA, MAYTIME: Received the Certificate of Merit at the Scottish National Sweet Pea Society's trials in the summer of 1937.

Maytime is a rich golden cerise color, producing four and five immense flowers on long, husky stems. This beautiful new novelty sweet pea is a big improvement over all present varieties of similar color class. For best results in planting all types of Sweet Peas it is advisable to inoculate all seed with Nitragin. This develops stronger and healthier plants and roots. Pkt. **25c.**

SWEET PEA, GOLDEN DRAGON: A very large duplexed flowered orange. The standard is a vividly bright orange, while the wings shade to a deeper, softer orange rose. A Sweet Pea of great merit which cannot be recommended too highly.

Golden Dragon, in comparison to other "oranges" produces large bold flowers that bloom on good sized stems. Pkt. **25c.**

SNAPDRAGON, CELESTIAL: This lovely flower was awarded the All-American Award of Merit for the 1938 season.

This is a Majestic type pf Snapdragon which blooms profusely throughout the entire summer and up until the first bad frosts in the fall. Long, beautiful blooms of Salmon-rose that make excellent floral displays of cut flowers and if left in the garden will add beauty and color to its surroundings. The blooms are on compact spikes of about ten inches in length. Pkt. **25c.**

GARDEN PEA, BIG BOY: Last year we presented a new garden pea especially developed for Western gardens. The sort that delights the market gardener and makes the housewife smile. We received so many fine reports that this year we are adding it to our All-American page.

Enormous dark green handsome pods, usually containing ten or more large luscious peas of excellent flavor and texture; produced on sturdy, upstanding vines. A dwarf variety that requires little care. Pkt. **15c;** ½ lb. **25c;** pound **35c.**

SQUASH, VEGETABLE SPAGHETTE: This interesting novelty is rapidly becoming very popular with Western gardeners. It is a light golden color and average size of about ten inches long and five inches wide; weight five pounds.

The usual custom is to cook the whole fruit then to cut it open when the flesh appears in shreds, very much resembling spaghetti in appearance. Butter and salt and pepper are added for flavoring. This, we believe, is the usual recipe, as the secret seems to be that the fruit be cooked whole without removing the shell. Pkt. **10c.**

CACTUS SEED: The cactus family stands apart, with little to connect it with other families of plants. Its history, origin and botanical connections are unsolved problems. However, it is rapidly gaining popularity with indoor gardeners and its many interesting and different types add greatly to any home. We offer a selection of mixed varieties. Pkt. **25c.**

ORNAMENTAL CORN: An excellent combination with assorted varieties of Gourds and easily grown here in the West. It takes the same culture as sweet corn and needs plenty of sunshine. Pkt. **25c.**

DIAMOND

Sweet Pea COLLECTION

9 Separate Packets 50c

What to do Each Month in the Year

JANUARY This is the time to do your planning indoors for the year's gardening. A good time, too, to make your compost bed. Spread soil over compost materials to speed decay. Moisture helps also, as does spading the mass to increase bacterial activity. To protect half hardy plants from frosts, mulch the ground around and over them this winter while ground is frozen, but do not mulch too heavily so that plants can't push their way up. If leaves, straw, etc., are used, try light covering of brush, with mulching material over it. Spray with dormant type spray every deciduous tree, shrub and bush during January or February. Divide perennial plants and move those not in proper location, also order the new ones you want. Don't overlook ground peat or compost. Gather suitable rocks for your rock garden every time you take a drive.

FEBRUARY Trim up any rock garden plants and shrubs that need it now. Plant the bare spots with the plants you have desired so long. Plants with good balls of earth may be safely transplanted now. Watering is seldom necessary when planting is done this month. See that all plants are firm in their positions. This is the ideal time to sow seeds indoors. Sow in small, clean cans.

MARCH Prune and spray fruit trees or bushes before sap flows and buds burst. Give trees coating of lime and sulphur, or oil emulsion—very effective for certain scale insects. Spray thoroughly; it pays. Prune or plant shrubs, roses, ornamental trees and hedges. Fertilize trees and bushes this month. Divide and replant old clumps of perennial plants. Plant Sweet Peas and Gladiolus early. Plant tender annuals indoors early this month, in flats, hotbed or coldframe. Transplant to garden in mid-April.

APRIL Still too early in most years to plant flower seeds outdoors, but you can try in a small way. Buy seeds early; plant about one-fourth of each packet this month if weather is good. You may have annual flowers much earlier if seed is sown now. Make early plantings in small beds, in sunny, sheltered places. Transplant about mid-May. Do not plant flower seeds too thickly or cover too deeply—one-eighth of an inch is enough. Water constantly and well. If you plan a new lawn planting this spring, prepare ground now. (See "Lawns"). Don't expect your garden to put up a good fight against insects and bad weather, if you starve it for plant food and moisture. Don't let insect pests and disease get a start.

MAY This is best planting month. At seed sowing time soil should be freshly turned and contain much moisture. Plant seeds thinly, not deeply; cover lightly, firm soil, provide moisture constantly during germination. Good common annual flowers of dwarf growth to fill in bare spots in your rockery are: Ageratum, Lobelia and Sweet Alyssum. For fragrance, try these annuals: Candytuft, Scented Stocks, Mignonette, double Nasturtium, Petunia, Pinks, Scabiosa, Sweet Alyssum, Sweet Peas, Sweet Sultan, Stocks and Verbena. For unusual foliage try: Castor Bean, Ice Plant, Mexican Fire Bush and Portulaca—all quick growing annuals that will help make your garden different.

JUNE Cultivate much in June. Look out for insect enemies this month. Spray or dust at first sign of trouble. Watch your Sweet Peas; moisten well. Avoid sprinkling the vines, however, as this fosters mildew. If mildew attacks them, dust with flowers of sulphur early in the morning. If you want blooms all summer and fall keep Sweet Peas from going to seed. Prune your annuals, especially those of spindling growth. Pinch out center shoots for more compact growth and extra blooms. Snip off all fading flowers in garden to prevent seed production. In late June take up Tulip bulbs; store in cool, dry, dark place for summer. Separate bulb clusters according to size. Cut back perennial Chrysanthemums from 1 to 1½ feet from the ground. Fertilize lawn early this month and water plentifully after fertilizing. Disbud all your roses. Pick off all lateral buds when still tiny and let strength go into terminal bud to produce perfect roses. Plant perennials now for full grown blooming plants next season, transplant in fall or winter. Start irrigating or sprinkling in earnest now.

JULY Plant Viola and Pansy seed this month for winter and early spring flowers. Plant perennials of all kinds and biennials in July for next season's bloom. Shade ground where you plant seeds now to keep surface from drying out and killing young seedlings. Freshly cut lawn clippings make a good spreading; no soil should be visible. This is a good time to start a compost bed with plant refuse and lawn clippings; also save leaves this fall and you will save money on fertilizer requirements. Water, fertilize and cut lawn regularly. After fertilizing water at once. Sow annual flower seeds now! Look over your rock garden. If not thriving, how is the soil? Best mixture for rock plants and alpines is one-half peat moss, one-fourth leaf mold and one-fourth garden loam. Never use clay—it packs and bakes; sand washes too easily. After clipping, water well and work in a little leaf mold or peat moss. Keep after your weeding.

AUGUST Cut your lawn every five to seven days and not too short. If too short, the yellow or brown undergrowth shows through. Snip off blooms of your annual flowers as soon as they are past their prime. Extra blooms will result. Annuals appreciate a good watering once a week. Plant perennials this month. Fall rains and natural hardening-off weather benefits them before winter rest, and in spring they emerge properly equipped by nature to bloom in their regular season. Spray, dust and bait the remainder of this year. Clean up waste plant material. Remove annuals that have finished blooming. Cut back perennials. Keep weeds out. Make rose cuttings this month. Remove all leaves, tie your cuttings in bundles with tops all in one direction and bury in moist soil six inches below surface (entirely covered) with tops down for three weeks. Then plant right side up, ten to twelve inches apart, with but one bud out of ground. Leave in nursery for one year and do not fertilize during this time. Use rich soil to start with. Take cuttings of all shrubby plants in much the same way.

SEPTEMBER Prepare now for planting spring flowering bulbs, such as—Hyacinths, Scillas, Muscari, Snowdrops, Crocus, Narcissus, Tulips, etc. This is your last month for lawn making. See "Lawns". Pull out annual flowers that are through blooming, to keep from going to seed. Light rains and foggy mornings do not take the place of good watering. Don't neglect good soakings this month. Transplant evergreen trees and shrubs now. Stake and support the tall things in your garden. Use wired wooden plant labels for labeling Dahlia roots and Gladiolus bulbs when dug for winter storage later in fall; also for marking trees, shrubs and plants. Watch for moss in the lawn and rake out with a moss rake. Moss indicates sour condition of soil—apply a complete fertilizer.

OCTOBER Plant spring flowering bulbs now: Tulips, Daffodils, Narcissus, Crocus, Hyacinths, Scillas, Grape Hyacinths, Dutch Iris, Spanish Iris, Anemones, Chionodoze, Eranthis, Galanthis, Ranunculus, Fritilaria, Ixia, Ornithogalum. Dig Gladiolus and Dahlia bulbs; dry and clean and then store in frost-proof place that is dark, well ventilated and is not too warm. Divide and transplant perennials that make early spring growth. Cut lawns regularly and fertilize with complete fertilizer. Remove matured plants and waste plant material from garden as early as possible. Add to compost pile; turn under. Gather up leaves as they fall, remove to compost heap, mix with a little earth. Indian Summer is a fine time to paint garden fences and furniture. Use Naphthalene Flakes when storing bulbs.

NOVEMBER Plant Sweet Peas for next season — deeper than for spring planting. Last chance to plant spring flowering bulbs—Tulips, Narcissus, Hyacinths. Early planting gives best results. Fertilize your lawn sometime this month with complete commercial fertilizer high in phosphates and potash. Set out Pansy plants for winter blooms. Plant Japan Quince, Snowberry, Oregon Grape. Sow seeds of Clarkia, Candytuft, Sweet Alyssum, Larkspur and other hardy annuals. Plant Roses, Oriental Flowering Trees, set out Hawthorns, plant conifers, and deciduous trees, maples, birches, etc.

DECEMBER Plan your next year's garden now. Make a diagram or drawing of your garden and mark location for your plants, thus avoid confusion by planning ahead for color schemes, arrangement, etc. If planting evergreens, leave a depression in the soil around them so that water shed by foliage will run back toward the trunk. If a mild winter, mow the lawn. Grass should not get too long during the winter. Spray fruit trees this month with reliable dormant spray such as lime and sulphur or oil-base spray. This kills many insects, prevents growth of moss and lichens. Cover entire surface of all branches. Spray again in spring. Remember your compost pile—adding leaves every day. If you have not already done so, mulch your lawn this month with ground peat.

Rock Gardens

IT is correct to assume that the ideal rock garden is one capable of supporting a healthy growth of alpine and rock plants. In order to display them in an appropriate setting and to provide proper cultural conditions, in part at least, approximating those under which they grew in nature, a rock garden is necessary.

Apart from their value in providing a picturesque and natural setting, a rock garden has several distinctly utilitarian functions to perform. They help to keep the ground cool, they conduct moisture to the roots of the plants and prevent in part its loss by evaporation. As many alpine plants grow in a situation where the soil is constantly moistened during the growing season with rain or snow water, the importance of providing a cool root run is immediately obvious. Rocks serve to give shade and shelter and aid in promoting the efficient drainage which is so necessary. Also they hold up the soil making it possible to provide a variety of contours in the garden.

The forms that rock gardens take are many and varied, ranging from the many positive directions made solely for the purpose of growing a large collection of alpines and rock inhabiting plants, to the type designed purely for a landscape feature in which the plants are merely incidental decorative material. The ideal garden lies between these extremes and consists of a construction in which the rocks are arranged artistically, usually with the same relation to what one might find in nature, and placed in such a way that a reasonably large collection of plants may be cultivated.

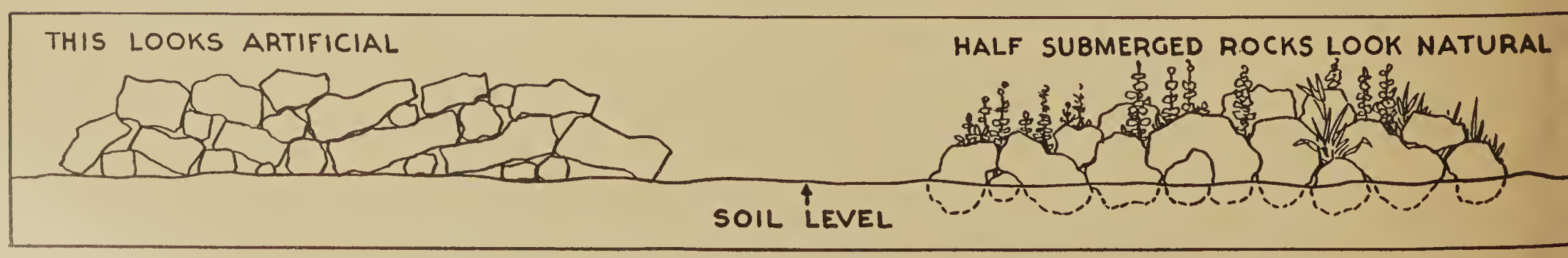
As a general rule, the site of the rock garden should be in the open, not subject to the drip of trees or to have to compete with their root systems.

Preferably the subsoil should be a porous nature permitting the rapid drainage of surplus moisture. This is true in spite of the fact that some alpines thrive in boggy situations. Where subsoil is not of this type, it is advisable to place a six-inch foundation of cinders before constructing the rockery.

Weather worn limestone of irregular shapes is perhaps the most pleasing material for construction and the easiest to work with, but weathered rocks of almost any kind can be used to advantage, provided they are angular and blocky in form with a natural color and of pleasing appearance.

Having decided on the location and knowing the kind and amount of rock available, the next step is to remove the top soil from the area. This top soil is the medium in which the rock plants will be planted, therefore should be saved. Next the subsoil should be shaped up so its contour roughly conforms with the general outline the rock garden is to assume. Its drainage is necessary, it is advisable at this time to put in the six inches of cinders.

In placing the rocks it is advisable to partly submerge the larger ones and build up from that point. This will give a more natural effect as well as provide better sites for planting alpine and rockery plants.



Growing Better Lawns

It is not difficult to have a good lawn, provided good Grass Seed is used and a little attention given to ground preparation.

The preparation of the soil is much the same in all cases—occasionally unusual conditions exist which call for special treatment.

A rich soil is not necessary as humus and fertilizer which are inexpensive, can be added to ordinary soils and a perfect lawn will result. May we suggest Peat Moss and Vigoro, the only eleven element fertilizer.

After clearing off the area, decide on the level or contours desired. Proceed to level in a rough way before starting to spade or fork the ground. After this has been done, the ground should be spaded or forked over. Lawn grasses are not deep rooted but the condition of the soil will be greatly improved by a good, deep cultivation. After the area has all been worked it should be watered and left for a week or two to allow weed seeds to sprout. It may be necessary, according to the time of the year, to water frequently to get the soil moist and weed seeds to germinate.

FINAL SOIL PREPARATION

Some soils are very sandy and lack fertility and moisture content. A top soil covering consisting of good loam about 3 inches thick combined with a good dressing of peat moss will provide an ideal soil for lawns.

On the other hand, heavy adobe and clay soils will be improved by a generous quantity of peat moss when spading the ground.

We have mentioned that the roots of grasses are not deep and for this reason we recommend that after the ground has been worked over and weed seeds sprouted a second forking over be done. Before doing this, however, a good dusting of Bone Meal should be applied to the soil and also a good dressing of humus (Peat Moss) should be spread on top. If weed free Sheep Guano is available put on a layer of about an inch all over the surface.

Having done this, fork over the ground about 3 inches deep, mixing in the Guano and Bone Meal thoroughly. Then rake over the surface to remove any stones and make the surface even. Remember, a little extra time spent in obtaining an even finish will help greatly toward an attractive finished lawn. If the soil is loose after raking it would be well to roll the ground with a light roller before seeding, but do not roll while the ground is wet.

SEEDING

The ground having been prepared, the method of seeding is next to be decided. A pound of Diamond Grass Seed will sow 150 to 200 square feet according to the variety of seed used. An even distribution of seed is essential.

After the seed has been sown it should be covered lightly about ⅛ to ¼ inch in depth. This is best done by what is called "tucking" with a rake. Instead of using the rake with the usual raking motion forth and back, employ a light chopping action with only a very slight pull towards you. All of the seed will not be covered but sufficient will. After this, roll the area lightly. After rolling sprinkle the lawn well with a fine hose nozzle. Do not let the ground dry out but sprinkle a little every day. In the heat of summer if a lawn is being put in it is a good plan to cover the ground after seeding with some Peat Moss or Pulverized Sheep Guano.

EARLY CARE OF LAWN

When the young grass is about 2 inches high it should be mowed. Early mowing makes the plants spread out and fill up the areas between the seedlings.

Early weeding should also be done as soon as possible. The sooner the weeds are out the quicker the grass will fill in. There is no weed seed in high quality grass seed. A good lawn will require cutting twice a week. Remember, it is easier work to cut the lawn while the grass is short and will take half the time and effort, and it is better for the lawn.

After the lawn is well established it is advisable to use a grass catcher on your lawn mower or rake well after cutting with a bamboo rake.

RENOVATING YOUR LAWN

It isn't one bit too early to make plans for the spring renovation of your lawn. If the seed is to be sown on honeycombed ground, late February or March is a good time, especially after a light snow, for as the snow thaws, the seeds settle into the ground, giving you a good, even job of seeding.

Lawns should be raked thoroughly as soon as the ground thaws, as this serves to scarify the surface soil, remove leaves, dead grass and any other debris that may have accumulated during winter.

Next apply a good grass seed. Experiments have proven this, even if the ground is still frozen, for as the grass starts growing, the food is available, thereby giving it an extra stimulant before weeds begin later in the spring. Fertilizer added while the weather is cool prevents the danger of burning even though it is not washed or brushed in. The loss from this is practically nil. Unless seeding was done before, it should follow the fertilizer application. Rake it in lightly or cover it with some weed-free soil applied as a top dressing. A coating of about ¼-inch will be beneficial on the seed as well as to established plants.

The right way to maintain turf is to seed and feed regularly, maintaining a proper balance between treatments. Seed should be used to replace the dead plants and cover bare areas, while food is needed to nourish the live plants. *Regular feeding is the most important factor in weed control, as it makes sturdy and aggressive grass plants, thus crowding out the weed growth.*

Spring rolling is important. A heavy roller is not required as the purpose is to firm grass crowns and roots into the soil. It is a mistake to try to level a lawn by rolling for if the roller is heavy enough to accomplish that, it will pack the soil causing it to bake during the summer. Sandy soil can stand heavier rolling than clay soils. It is best to roll after seeding, but the time element is most important. Usually there are a few days in spring when a lawn is dry enough to be rolled without packing the soil and yet sufficiently moist so the rolling does some good. A lawn should be rolled, even if it is necessary to roll again after seeding. An average roller weighing from 175 to 225 pounds of weight for each foot in length of the roller is considered proper for ideal results.

MOSS AND WEEDS

The presence of moss is an indication of inadequate drainage or soil impoverishment. The most effective cure is the application of Sulphate of Ammonia or Vigoro about three times during the season, raking the lawn well before each application. Do Not Use Lime. *Late experiments have proven beyond a doubt that lime will not check the growth of moss, some even showing that it has encouraged its growth.*

For descriptions of each type of lawn seed see page 41.

ASTER AURORA GOLDEN SHEAF

Asters

ASTERS are among the most useful decorative late summer plants for the amateur home gardener. They are easy to grow, require only normal care and give an abundance of flowers in return for the care given. In warm sections, seed can be sown directly in the garden after frost time. Here in the Northwest they should be started in flats indoors and the plants set out about the middle of May or thereabouts.

Asters like a rich soil, preferably rather sandy or loamy. They should be cultivated regularly and watered before the soil becomes too dry. Each plant must have plenty of space to develop fully without being crowded. The tall branching varieties should be set about 15 to 18 inches apart, each way, and the medium growing sorts 10 to 12 inches apart, while the dwarf types can be as close as 8 to 10 inches.

Few, if any, important flowering plants are as seriously attacked by disease as the Aster. The most important of these diseases is the Aster Wilt.

Aster Wilt or stem rot is caused by a specific parasitic fungus. The disease is soil borne, meaning the fungus lives in the soil and is transmitted to the Aster plants from the soil. The fungus enters the plant through the root system, and gradually creeps up the stem through the vascular tissue and will eventually destroy the food and water bearing channels of the plant. When once introduced into the soil, the fungus persists indefinitely and may attack Aster plants which are growing there even years later. The spores of the fungus may be disseminated on Aster seed, on implements used in working the soil, or on anything which comes in contact with a diseased plant. It is, therefore, very evident that the wilt disease is widespread wherever Asters have been grown. So far, there is no known method of combating this disease, except by the use of wilt resistant seed.

Aster Super Giants are the latest development in the Aster field. The plants are robust and strong growing, 2½ to 3 feet tall with six or eight long, non-lateral stems per plant. The flowers are extremely large, as much as 6 or 8 inches across, with numerous long, graceful feathery interlacing petals. Their full shaggy effect has been likened to some of the looser varieties of Chrysanthemum. So far there are only two colors in the group. Los Angeles, a lovely soft shell pink, blending to creamy pink in the center. **Packet, 10c.** El Monte, a deep glowing crimson, the only large flowered crimson Aster on the market. The later variety is an earlier bloomer and is therefore suitable for planting in all localities. **Pkt., 20c.**

The Improved Crego Wilt Resistant type is probably the best known of all Asters and is the most generally used. All varieties of this type are wilt resistant. The plants are about 2½ feet tall, branching in habit with long, strong stems, making the flowers well adapted to cutting as well as for garden use. The blossoms are good size, 4 to 5 inches across, fluffy, with numerous long, slender, curly tipped petals, full centered and of good substance. *We offer the following varieties: white, shell pink, deep rose, crimson, orchid, azure blue, purple and mixed.* **Packets, 10c.**

The Improved Giant California Sunshine type is the highest development in its class, rightly called the most beautiful Aster in the world. The flowers, 4 to 5 inches across, are among the loveliest of all Asters, composed of a single row of loosely placed outer petals, contrasting with the unique quill-like center discs. The stems are long and extremely heavy, practically without lateral branches, while the plants are from 2 to 3 feet in height. They are mid to late season blooming. None of the varieties have been developed in wilt resistant strains. *We offer the following varieties: white, pink, lavender, violet, carmine and mixed.* **Packets, 10c.**

The Improved Giants of California curled and interlaced Aster. Plants are somewhat taller than the Super Giants and carry a few lateral branches. They reach a height of about 3 feet and usually carry from 8 to 10 or even 12 flowers per plant. The flowers are large and full, 4 to 5 inches across, with graceful, curly tipped petals. Late bloomers so seed should be started early indoors in flats. *We offer the following varieties: white, peach blossom, light blue, deep rose, dark purple and mixed.* **Packets, 10c.**

The Improved Queen of the Market are somewhat different from the old original strains. They have been developed for use as cut flowers as well as for border work with the result that the stems are comparatively long, about 10 to 12 inches, and strong. The plants are about 18 to 20 inches tall and bear generous quantities of medium sized, 2½ to 3-inch flowers. *We offer the following varieties: white, light blue, deep rose, scarlet, purple, peach blossom and mixed.* **Packets, 10c.**

Other types of Asters listed under Annuals and Perennials. Page 18.

AGERATUM: (hA) Small balls of color in sizeable clusters. Constant bloomer from spring to fall. Culture—likes rich, light, well fertilized loam. Combines with Columbines, Scabiosa, Delphinium, French Marigold, Salpiglossis. *Varieties: Tall Blue Perfection, 2 ft. tall; Blue Perfection, medium blue, large flowers semi-dwarf; Little Dorrit, white, dwarf; Little Dorrit, light blue, dwarf.* **Packets, 10c.**

ALYSSUM: (hA) White, sweet scented edging and basket plants. For borders sow thickly. Grown best in rich, light, well fertilized loam. Combines with Violets, Forget-me-nots, Gypsophila. *Varieties: Benthami Martimum, white sweet scented—1 ft.; Little Gem, white—6 inches; Lilac Queen, lavender—6 inches; Dwarf, white—3 inches; Gold Dust (saxatile compactum) perennial, yellow—1 ft.* **Packets, 10c.**

AMARANTHUS: (hA) Does well in hot sunny places. 1-2 ft. tall. Related to Cockscomb. Grown for the vividly colored foliage and showy flower clusters. Does best in moderately rich light soil. *Position*—plant in borders in front of shrubbery. *Varieties: Caudatus (love lies bleeding) crimson drooping flower spikes, tall. Joseph's Coat (tri-color) red, yellow and green foliage. Tall. Mixed Shades.* **Packets, 10c.**

CALENDULA CHRYSANTHA

CALENDULA *(Pot Marigold):* (hA) Does well in sunny or partial shade. Hardy, stout growing, with entire bright-green, thickish leaves. Continual bloomer. Grows in any soil, but responds to moderately rich loam. *Grouping*—for bedding out; in front of shrubbery; for the mixed border, combining with Delphinium, Shasta Daisy, Salvia or Alyssum. *Varieties: Chrysantha, buttercup yellow with incurved petals; Orange Shaggy, deep orange shading to lighter center; Radio, deep orange with quilled petals; Balls Gold, golden yellow, light center; Balls Orange, bright orange shades; Campfire, deep orange with scarlet sheen; Double Mixed.* **Packets, 10c.**

CALLIOPSIS: (hA) Graceful for border plants, supplying throughout the summer an abundance of showy flowers of: yellow, crimson and maroon. Tall varieties excellent for cut flowers. Grows in any soil, but prefers a rich, light well fertilized loam. *Grouping*—with Coreopsis, Deep-blue Delphiniums, Snapdragons and Salvia. *Varieties: Tall Single Mixed; Tall Semi-Double Mixed; Dwarf Crimson King, deep crimson with yellow backs; Drummondi (golden wave) golden yellow center; Dark Brownish Red.* **Packets, 10c**

CANDYTUFT: (hA) Very showy, branching plant. Excellent for beds, masses, rock gardens and cut flowers. Blooming prolifically in spring, and during other seasons by successive sowing of seed. Grows in ordinary soil. *Varieties: Coronaria, giant white hyacinth flowered; Umbellata Type, crimson, lilac, rose, cardinal, white, flesh pink, rose carmine and mixed.* **Packets, 10c.**

CANTERBURY BELLS: (hB) The real bell flower. Branching plants heavily loaded with large pendant bells. Both in plain and cup and saucer types. Excellent for flower borders and rockery background. *Grouping*—with Scabiosa, Perennial Aster and Lupine. *Varieties: Campanula Medium; single mixed, double mixed. Calycanthema, (cup and saucer); light blue, dark blue, white, rose pink and mixed. Annual Mixed,* blossoms from seed in less than six months. **Packets, 10c.**

CHRYSANTHEMUM: (hA) Attractive long-stemmed summer flowering plant, wide varieties of color. Sow seed in flats and transplant when soil is warm. Height from 1 to 2 ft. *Grouping*—used in the annual and mixed borders, combining with orange and yellow flowers, or massed alone. *Varieties: Coronarium, double mixed; Carinatum, single mixed; Carinatum, tall double yellow and tall double mixed.* **Packets, 10c.**

CLARKIA *(Rocky Mountain Garland):* (hA) Grows from 12 to 18 inches tall and does well in sunny or light shade. Branching, erect plant, with smooth, light-green leaves. Furnishing an abundance of cut blooms as well as attractive green foliage. Grows in ordinary light garden loam. *Grouping*—plant with Larkspur, Pansies, Nicotiana or Virginia Stocks. *Varieties: Scarlet Queen, Salmon Queen, Fireband, Brilliant, also Single and Double Mixed.* **Packets, 10c.**

COLUMBINE *(Aquilegia):* (hP) Erect, branching plant, with long, slender stems. Will thrive in almost every situation, preferring partial shade and considerable moisture. Should be sprayed often to prevent aphis. *Groupings*—with Delphinium, Perennial Candytuft, Scabiosa, Stocks and Snapdragons. *Varieties: Mrs. Scott Elliott (long spurred*—**pkt. 15c**), *Pink Shades* **(15c)**, *Blue Shades* **(15c)**, *Silver Queen* **(15c)**, *Copper Queen* **(15c)**, *Double and Single Mixed,* **packet 10c.**

COREOPSIS *(grandiflora):* (hP) A spreading plant, with long, smooth, dark green lanceolate leaves; large, daisylike, golden yellow flowers. Plants grow from 1½ to 2 ft. Drought resistant; grows in any soil but best in moderately fertilized, light loam. *Grouping*—Blue Cornflower, Blue Salvia, Delphinium and Blue Larkspur. *Varieties: Double Sunburst, large golden yellow fully double; Lanceolata, golden yellow semi-double.* **Packets. 10c.**

DIGITALIS—FOX GLOVE

DIGITALIS *(Fox Glove):* (hP) 4 to 6 feet tall. Best in semi-shade, but will grow in sun. Long spikes that are crowded with large thimble-shaped blossoms beautifully spotted. Grows in any soil, but prefers a rich, well fertilized, light garden loam; harbors sow bugs and snails. Work Naphthalene in soil around the plants. *Grouping*—in perennial border, alone or grouped with Hollyhock, Canterbury Bells, Shasta Daisy, Poppies, etc. *Varieties: Purple, Rose, White and Mixed.* **Packet, 10c.**

DELPHINIUM *(perennial Larkspur):* (hP) 1 to 8 feet, according to species and kinds. Sun loving but endures slight shade. Blooms freely from May until late fall. Grows in a variety of soils, but prefers rich, well drained, rather light soils, fertilize with manures during growing period, complete plant food during blooming period; peat or leaf mold should be added to heavy soil, bone meal also helpful. *Grouping*—Columbine, Salpiglossis, Snapdragons, Stocks and Gladiolus. *Varieties: Wrexham Hollyhock Strain* **(15c)**; *Gold Medal Hybrids* **(15c)**; *Blackmore and Langdon Strains* **(35c)**; *Bellamosa, dark blue; Belladonna, light blue; Finest Mixed.* **Packets, 10c.**

GAILLARDIA (*Blanket Flower*) : (A&P) 1 to 2 feet and spreading. Sun loving, but endures slight shade. Free blooming from early spring until late autumn frost. Gray-green, lobed, variable leaves with large daisylike flowers. Very hardy, tolerating most soils, avoid fertilizer containing too much nitrogen; drought resistant, growing well on sandy banks. *Grouping*—plant in mixed border with dark blue Delphinium, russet Snapdragons, Salvia or Chrysanthemums. *Varieties:* (*Perennials*) *Dazzler, maroon red, golden yellow; Portola Hybrids and Mixed.* (*Annuals*) *Lorenziana, double mixed; Single Mixed.* **Packets, 10c.**

GEUM: (hP) 18 inches tall. Best in sun, but tolerates some shade. Hardy plants, with rosette formation of large, rough, strawberry-like leaves; long flower stalks, bearing double roselike flowers. Sow seed in early fall or early spring, produces blooming plants in one year. Grows well in most light soils; attacked by soil pests, use Naphthalene Flakes in soil. *Grouping*—looks well with tall Lobelia, Michaelmas Daisy and Salvia. *Varieties: Mrs. Bradshaw, scarlet; Lady Stratheden, golden yellow; Mixed.* **Packets, 10c.**

COSMOS: (hA) Furnish an abundance of cut blooms during the early flower season. Seed sown in the open ground in April should bloom in July. Transplant not less than 18 inches apart. Pinching out tops when plants are a foot high makes them bushy and sturdy. Grow best in moderately rich, sandy loam. *Grouping*—Plant between shrubs; in the background of mixed border, combining with Shasta Daisy, Lavender, Poppy and Regal Lily. *Varieties: Orange Flare, deep orange blooms early; Klondyke, orange; Early Double Crested (anemone flowered), pink beauty, white queen and mixed; Early Flowering Mammoth, light pink, crimson, white and mixed.* **Packet, 10c.**

CARNATION: (tP) Grows from 1 to 1½ ft. Easily winter killed, should be sown in flats during March. Transplant to other boxes when plants are 1 inch high, transfer to open soil when ground becomes warm. Carnations are best planted by themselves. *Varieties: Chabaud Double Giant, cardinal red, deep rose, flesh pink, mixed.* (*Annual*) *Marguerite, blooms four months from sowing, in mixed shades only.* **Packets, 10c.**

GODETIA *(Satin Flower):* (hA) Grows from 1 to 2 feet tall in sunny or slightly shady places. Erect, slender branching plant; bright green, lanceolate leaves; large, expanded, single and double, satiny flowers. Seed should be sown in flats, transplanted when soil is warm. Grows in rather poor, sandy soil. *Grouping*—generally looks best alone, can be combined with Clarkia, Larkspur, certain Snapdragons and Stocks. *Varieties: Dwarf rose, crimson, white, pink and mixed. Tall Double Azelia Flowered carminea, crimson, lavender, rich pink and mixed.*
Packets, 10c

GYPSOPHILIA *(Baby Breath):* (hA) These light airy plants have a hairlike foliage and produce a very lovely effect in the garden. Excellent with bouquets. Sow seed outdoors in early spring, repeat sowings for longer season of blooms. Thrive in moist moderately rich soil. Does well in rockeries. *Varieties: Grandiflora Alba, true white; Grandiflora Rosea, pink; (Perennial) Paniculata Alba, single white.* **Packets, 10c.**

DIAMOND SWEET PEA COLLECTION

SPECIAL

90c VALUE

NINE SEPARATE COLORS

50c

HELICHRYSUM (*Monstrosum*): (hA) Strawflower, growing from 2 to 3 feet tall. Stout branched plant, with oblong-lanceolate, bright-green, stiff leaves. This hardy annual makes an excellent winter bouquet with its red, yellow and white flowers. Sow in the open and transplant or thin out to twelve inches apart. Should be transplanted in separate bed by themselves. *Varieties: Golden Ball; Scarlet Ball; Salmon Queen; Silvery Queen; Double Mixed.* **Packets, 10c**

HOLLYHOCK *(Althaea):* (hP) Grows 6 to 12 feet in sun or partial shade. Erect plants with spirelike, simple, hairy stems; large, rough, heart-shaped leaves; large, regular, round blossoms of various bright colors. Grows in any soil, enrich with sheep manure. Subject to rust. Control rust with fine dusting sulphur. *Grouping*—The stately Hollyhock is appropriate along walls, lattice fences, etc. Excellent when interspaced among shrubs. *Varieties: Double salmon rose, rose pink, scarlet yellow and mixed. Single mixed. (Annual) Single Mixed and Semi-double Mixed.* **Packets, 10c.**

LARKSPUR: (hA) Grows from 3 to 4 feet in sun and light shade. Erect, bushy plants, with light green, finely dissected leaves. Flowers quickly form after plant is once established. Seed can be successfully sown in early spring. For earlier blooms, plant in flats and transplant. Prefers a rich, well fertilized soil. Use a complete plant food. *Grouping*—Blue Lace Flower, Hybrid Delphiniums, Clarkias, Snapdragons and Candytufts. *Varieties: Giant Imperial Daintiness, lavender, White Spire, Lilac Spire, Blue Spire, Blue Bell, Carmine King and Miss California, deep rose on salmon. Exquisite Rose Pink and Mixed. Tall Double Flowered, bright rose, light blue, dark blue, white, La France (salmon pink), Los Angeles (brilliant pink) and mixed.* **Packets, 10c.**

LARKSPUR

LOBELIA: (hA) Grows 6 to 12 inches in sun or light shade. Trailing, or compact, bushy plants; variable, dark-green, bronzed, or light-green leaves. Irregular, small, tubular flowers, borne on slender pedicels, varying from light to dark blue. Excellent for borders, rock work and hanging baskets. For best results sow thinly in flats, covering with glass until seedlings are through soil. Transplant into a moist, well fertilized bed. *Grouping*—Gold Tuft, Iceland Poppy, Coreopsis, Siberian Wallflower and Pot Marigold. *Varieties: Crystal Palace Compacta, dwarf bright blue; Gracilis, Sapphire, blue trailing; Pumila Rosea, dwarf pink; blue white eye, trailing.* **Packets, 10c**

MIGNONETTE: (*Reseda*): (hA) A branching plant, growing 6 to 10 inches high, with dark-green, spatulate leaves; close-set, spike-like racemes of very fragrant flowers, blooming normally in August, but also in other seasons. Can be grown easily from seed and should be planted in rich light loam. *Grouping*—this plant does exceedingly well with practically all annuals. Should be planted in places where color is needed. *Varieties: Odorata Grandiflora, white; Victoria Perfecta, brilliant red.* **Packets, 10c**

MORNING GLORY: (hP) Plant in a sunny place. Grow from 6 to 18 feet, with slender climbing or twining stems. Variable, lobed or parted leaves with long, funnel-shaped flowers. A constant bloomer from June until September. Seed should be notched if hastened germination is desired. Does best in strong, fertilized soil with plenty of water. Plants should be cut down each fall for new growth. *Grouping*—should be planted separately for covering garages, fences or pergolas. *Varieties: Major Tall Mixed; Japanese Fringed Mixed, Clarks Mammoth Blue, sky blue shading to yellow in throat.* **Packets, 10c**

GOURD: A name formerly applied to the plants and fruits of any species of the Gourd Family (Cucurbitaceae), including pumpkin, squash, cucumber and melon. It is now restricted (in N. America) to the ornamental, inedible-fruited species of cucurbits, of which the following are most popular: the yellow-flowered varieties; the white-flowered ones, to which also belong the dishcloth, mate (or utensil gourd of Paraguay), the calabash and some of the serpent or snake gourds; wax or white gourds; gooseberry gourds; hedgehog gourds; cranberry gourds; and ivy gourds. The true calabash is not a gourd, but the fruit of a tropical tree of the Bignonia Family.

All these gourds are tender annuals, either trailing or climbing by means of tendrils. They thrive in the full sun, in well drained, rich soil. Usually the seed is sown where the plants are to remain, but sometimes, to save time, it is started on inverted sods or in small flower pots, the plants being set outdoors after danger of frost has passed. The plants are rapid-growing and, having good foliage, are often planted for summer screens to be trained on trellises or strings against porches facing south. Powdery mildew frequently appears as a white coating on the leaves. To control it, dust with fine sulphur. For other diseases and insect and control measures see your seed dealer. The ripe fruits of many small varieties are of odd shapes and markings so are often used as curiosities or ornaments. A growing practice is to clean and varnish or shellac them for use in table centerpiece arrangements. Some of the larger ones are used for dippers, wren houses and other purposes. **Packet, .05c.**

MARIGOLD CROWN OF GOLD

Marigold

THE African and French Marigolds are truly the amateur gardener's best friend. They are both hardy and colorful, which makes them ideal for all types of garden work. The Marigold usually begins to flower in the early part of July and continues to give out a succession of blossoms until the branches are destroyed by frost. When judiciously planted they add considerably to the gaiety of any flower bed, especially during the later months of the flowering season. The tall African Marigold is excellent when used as a background for medium-tall flowers of red and pink shades, or displaying its golden corollas among the evergreen shrubbery. While the more richly painted petals of the French Marigold is well calculated to contrast with the blue or purple varieties of Asters, since no plant displays a richer coloring of mahogany and gold.

These showy annuals may be raised by sowing seed in the open garden as soon as the soil is warm, but the more certain method of procuring fine plants is to sow the seed in flats or hot beds about the first of April. While the plants are developing in the flats they should have plenty of air circulation and moisture. When the young seedlings have reached a growth of about 6 inches and the soil has had an opportunity to warm up, they should be transplanted to their position in the garden.

During the past few years several new, outstanding varieties of Marigolds have been developed and we highly recommend several of these types for Northwest gardens. Growers have at last overcome the one poor feature of these beautiful flowers. Namely, odor!

See All Americans for other Marigolds.

Marigold Crown of Gold. The plants of the Collarette Marigold Crown of Gold are absolutely uniform in every respect, including such desirable characteristics as height of plant, general habit of plant, time of flowering, and character, size, shape, and color of flower heads.

Individual plants deviate very little from the average height of twenty-four inches. The lower branches are clustered near the ground level, while the higher branches are sub-opposite or alternate on the main stem. The principal stem runs through the plant and determines its ultimate height. The lower-most lateral branches are ascending, but are only about three-fourths the length of the main stem so that the plant assumes a top-shaped habit. The plants are extremely floriferous, which gives to a plant in full bloom the appearance of a large orange top with a green base.

Seeds sown out of doors in the spring develop into plants that begin to bloom in July, and continue blooming until they are killed by frost.

Packet, 10c

Dixie Sunshine Marigold occupies a sure place in the group of new Marigold types. It is a most charming and unique strain. The medium sized flowers, 2 to 2½ inches across, are fully double and ball-shaped, ingeniously composed of dozens of tiny five-petaled florets which are gracefully interlocking and daintily fringed in effect. The brilliant golden yellow color is well set off by the lush green foliage of the bushy, rather tall plants. **Packets, 20c.**

Double Royal Scot French Marigold. As modern in appearance as any flower now offered, Royal Scot is one of the most striking color combinations one could wish for. The large, well-formed double flowers are produced in abundance on plants from 24 to 30 inches in height, fine for garden or cutting. Color is a bold combination of mahogany and gold in symmetrical stripes. **Packets, 20c.**

Guinea Gold Marigold. While this type cannot be classed as a newer variety, its popularity and loveliness gives it special mention. The flowers are a gorgeous orange with loosely ruffled petals. The plants are free bloomers and practically all flowers are double. **Packet, 10c.**

Dwarf French Single: Diadem, mahogany red; Gold Star, yellow striped maroon; Legion of Honor, little brownies; Signata Pumila, very dwarf bright orange; Mixed colors. **Packets, 10c.**

Dwarf French Double: Golden Ball, golden orange; Lemon Ball, lemon yellow; Robert Beist, dark brownish maroon; Mixed colors. **Packet, 10c.**

Tall French Double: Royal Scot and Mixed colors. **Packet, 10c.**

Tall French Single: Josephine, brown.
Packet, 10c

Tall African Double: Orange; Lemon, Mixed.
Packet, 10c

Nasturtiums

GLORIOUS GLEAM Hybrid Nasturtiums have taken the plant world by storm. Delightfully sweet scented, beautifully double and in a remarkable color range, they fulfill all requirements for an all-round garden favorite. The color range includes a brilliant blend of salmon, golden yellow, orange scarlet, cerise, cream, orange, maroon and crimson shades, as well as many spotted varieties. **Packet, 5c.**

Golden Gleam Nasturtiums, the first of the newly developed double, sweet scented nasturtium and by far the most popular. These plants are semi-dwarf, bearing the flowers well above the light green foliage on long, wiry stems. The flowers are especially fine for both garden and cutting. **Packet, 5c.**

Scarlet Gleam Nasturtium is now fully double and will come true to color. The flowers are large and full petaled, waved and fluted in effect, and extremely showy. Completely covering the foliage of the plant, the long stemmed orange scarlet flowers make a dazzling splash of color. Richly sweet scented, Scarlet Gleam is ideal for garden and cutting. **Packet, 10c.**

For those who still prefer the good old fashioned type, we offer the dwarf mixed and tall mixed. **Packet, 5c.**

PHLOX DRUMMONDI: (A&P) Plants growing from 6 inches to 3 feet, according to type. Creeping and erect forms, smooth or pubescent. Leaves variable; salver-shaped flowers in bright colors, blooming in spring, summer, or early fall, according to kind. Perennial Phlox should be kept moist during the dry season, mulch with peat moss or leaf mold during winter and summer. Cut plants back after flowering season. Annual Phlox prefers a somewhat moist, light, porous soil, containing gritty material. Goes well with Verbenas, Petunias, Gypsophila and Snapdragons. *Varieties: Chamois Rose, carmine eye; Crimson; Scarlet; White; Isabellina, pale yellow; Mixed; Star Phlox and Dwarf Mixed. Decussata Perennial Mixed Phlox.* **Packets, 10c.**

PANSIES *(Viola Tricolor):* (hA) A low-growing border and bedding plant, best with sun and moderate shade. Bushy plant, with oval or heart-shaped leaves. Irregular, fragrant, spurred, flat-petaled flowers in many colors, blooming from March into fall. Seeds should be sown in late August for early blooming, in spring for late spring and summer blooming. Spring sown seeds should be planted in flats and transplanted just before blooms appear. Pansies should grow in light, sandy or peaty, well fertilized, moist soil; provide mulch for winter protection. Use Naphthalene Flakes for protection against soil pests. *Grouping*—in separate bed or with Alyssum, Columbine, Yellow Snapdragons, Iceland Poppy, etc. *Varieties: P.S.C. Super Giant Swiss Mixed* **(20c)**; *P.S.C. Growers' Special Mixed* **(20c)**; *Oregon Giant Mixed; Adonis, light blue with white center; Cornflower Blue; Giant Dark Blue; Giant Striped; Golden Queen, pure yellow; King of the Blacks; Madam Perret, dark wine pink with red frilled petals; Snow Flake, pure white; Violet Blue, dark blue; Master Piece, giant ruffled.* **Packets, 10c.**

PINKS *(Dianthus):* (A&P) Grows from 10 to 14 inches high, and bears beautifully colored single and double blossoms in profusion all summer. For best results seed should be sown in flats and transplanted when soil is warm. Largely used for borders or massed in beds. Excellent for cut flowers. *Grouping*—can be planted in separate beds or with Snapdragons, Delphiniums, Stocks, Carnations, Sweet Williams and Petunias. *Varieties: (Annuals) Chinensis, flowers produced in clusters, single and double mixed; Heddewigi Double, Fire Ball scarlet, Salmon King deep pink, Snow Ball, white, Mixed; (Perennial) Clove Pinks, Pheasant's Eye single mixed, Pheasant's Eye double mixed, Single Mixed and Double Mixed.* **Packets, 10c.**

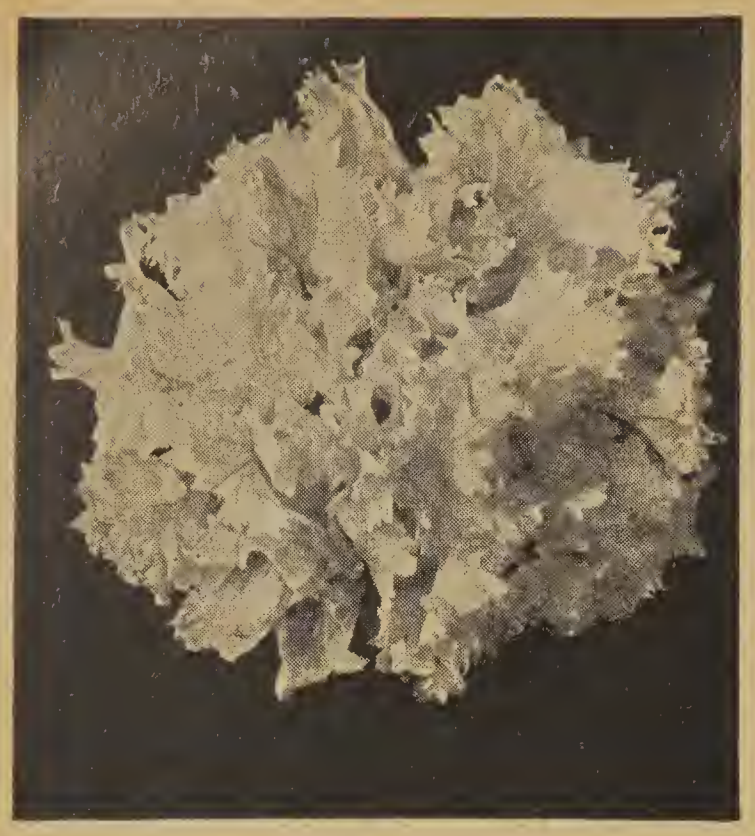
DOUBLE GLEAM NASTURTIUM

SALVIA: (hA) 1 to 3 feet. Should be planted in a sunny location. Erect, branching plants, with variable leaves and irregular, tubular flowers, blooming in summer or fall. Will grow in ordinary soils, fertilize with sheep manure. Best with background of shrubs having dark-green, glossy leaves. *Groupings*—Plant with yellow Lupine, yellow Snapdragons, Calendulas or deep blue Delphiniuin. *Varieties: Azure Grandiflora, sky blue; Bonfire, clear red; Splendens, brilliant scarlet; Zurich, dwarf early mixed.* **Packets, 10c.**

PORTULACA (*Rose Moss*): (hA) An exceptionally fine flower for dry sunny spots where most plants are unable to thrive. A dwarf plant only 6 inches in height and blooms profusely from early spring to late summer. Brilliant colors of: Red, yellow, pink, white, and striped. Sow seed indoors and transplant at early spring warmth. *Varieties: Single Mixed and Double Mixed.* **Packet, 10c.**

PRIMULA (*Primrose*): (hP) A favorite for growing outdoors in mild climates and very fine for potting, flower baskets and window boxes. *Varieties: Malacaides, light lilac and mixed; Kewensis, golden yellow.* **Packet, 15c.**

PHYSALIS (*Chinese Lantern*): These plants will add a bit of Oriental touch to your garden. Its lacquer red blooms have much gaiety and charm. If planted among Gyposphila (Baby Breath) you will have a beautiful growing bouquet. *Variety: Francheti.* **Packet, 10c.**



DOUBLE FRINGED PETUNIA

Petunias

THE garden petunias are very popular tender annuals, widely used for bedding, window boxes, pot plants, or for the border. They are all best treated as tender annuals, the seed started indoors or in the greenhouse 7 to 8 weeks before the plants are to be put outdoors. This should not be done until warm weather is settled. Nearly all the strains are summer bloomers and will stand no frost. Those who do not wish to start the plant indoors can sow seed (after frost time), but such plants will be delayed in flowering.

Unfortunately, petunias, while often self-sown in some of the strains, are quite likely to revert to a wild type, so that self-sown seedlings are pretty sure to deteriorate. It is advisable to weed out these second growth Petunias and reseed each year with fresh seed.

Petunias require a rich, light, well fertilized soil, however, the fertilizer should not be applied until after the plants are established, then use a good complete plant food. A liberal amount of peat moss or leaf mold, or both, should be worked into the bed before planting. When setting out transplants be careful to avoid the direct sun as tender Petunia plants will wilt rapidly.

Petunias have enjoyed great popularity in recent years, and the focus of interest lately has centered on the dwarf growing, compact types, of which the new Martha Washington ushers in an entirely new version. The plants are about nine inches tall, in a perfect ball effect, actually covered with dozens of the delicately ruffled medium-sized flowers. The color itself is an interesting combination, blush pink at the edges, deepening to dark violet in the throat, with heavy veining. It comes exceedingly true to color and type, and is excellent for use as a bedding, border or window box plant. **Packets, 15c.**

Miniature Petunias Rose Gem and Pink Gem. These two charming types have filled a vacancy home gardeners have had for years. Where a low, solid bed of color is needed nothing does quite as well as these two varieties of miniature petunias. The plants are neat and compact, 5 to 6 inches in height and smothered with richly colored blossoms about 2 inches in diameter. Rose Gem **(15c)**; Pink Gem **(10c).**

Giants of California are the largest of the single flowering petunias. The flowers are completely ruffled with large, graceful throats. Excellent in beds by themselves or grouped with Dwarf Lobelia. Mixed colors.
Packets, 15c

Dwarf Giants of California are a compact form of the above. Especially fine for potting and also go well in a bed with the taller variety.
Packets, 15c

Varieties: Bedding Petunias; Balcony Blue; Balcony Rose; Balcony White; Rose of Heaven; Rosy Morn; Single Mixed. **All Packets, 10c.**

Taller varieties of Petunias: Elks Pride, deep purple, **25c**; *City of Portland, pink,* **25c**; *General Dodds, blood red,* **25c**; *Dainty Lady, delicate golden yellow,* **25c**; *Double Choice Mixed,* **25c**; *Double Fringed Mixed,* **35c**; *Flaming Velvet,* **25c.**

POPPY (*Papaver*): (A&P) Flowers growing from 6 inches to 4 feet, according to type. Erect plants, with usually hispid, coarsely toothed, pinnatifid leaves. Small to large globular, brightly colored flowers, blooming in spring and summer. Perennials are planted in fall and annuals in early spring. All types require a well drained, moderately rich, light loam, not too much moisture. *Grouping*—Effective by themselves, or grouped in a mixed border with yellow and orange Snapdragons, Lobelia, tall, Violas, etc. *Varieties: (Annuals) Shirley, double mixed; Carnation Flowered, tall double mixed; American Legion, single brilliant orange; Flanders, single blood red; California Poppy (Aurantiaca), orange. (Perennials) Elmonte Tangerine, orange; Oriental Mixed.*
Packets, 10c

SALPIGLOSSIS *(Painted Tongues):* (hA) 1 to 2½ feet in height and should be planted in a sunny place. Erect plants, with oblong, wavy-toothed, dark green leaves. Large, tubular, velvety textured, lily-like flowers in bright and gaudy colors, blooming from early June into fall. Seed may be sown in outdoor beds but best results are obtained from starting in flats. Requires a rich, light, well fertilized, well drained loam. *Grouping*—Impressive in front of dark-green foliage, and in mixed borders with Salvia, Lobelia, Siberian Wallflower, stocks. *Varieties: Brown and Gold; Scarlet and Gold; Violet and Gold; Purple and Gold; Rose and Gold; Crimson and Gold; Yellow; Mixed.* **Packets, 10c.**

SCABIOSA (*Pincushion Flower*): (hA) 1½ to 3 feet tall. To be planted in sun or semi-shade. Bushy plants with divided foliage and dense heads of irregular flowers, blooming in spring, summer and fall according to type. Seed can be sown outdoors, but earlier blooms can be had if started in flats. Grows well in ordinary soils, but favors well fertilized, somewhat sandy loam. *Grouping*—combine with Ageratum, Snapdragon, Perennial Phlox, Sweet Williams and Stocks. *Varieties: Azure Fairy, blue; Peach Blossom; Fire King, scarlet; Flesh Color; King of the Blacks; Loveliness, pink; Double Mixed. (Perennials) Japonica, lilac.* **Packets, 10c.**

Snapdragons

Snapdragon is the common name for the popular Antirrhinum, a member of the figwort family, comprising a dozen or more species of erect perennial herbs that are usually treated as annuals, as they flower from seed the first year. From the original type with its white to purplish, sac-like, two lipped flowers, hybridists have developed a number of strains outstanding in beauty of form, color and even fragrance.

Seed should be sown indoors in March or April. It may be slow in germinating but after the true leaves have formed the growth is usually rapid. The small plants can be transplanted to the open as soon as danger of frost is over; they will flower from July until frost if the blossoms are picked as soon as they fade. Seed may also be planted in the open in August, and the seedlings transplanted to pots for winter bloom, or the plants can be covered with a mulch over winter to give earlier summer flowers.

To encourage the growth of flower-bearing side branches, the central bud should be pinched out when transplanting; followed by occasional pinching of other too-vigorous shoots, this will result in a compact oval plant covered with short racemes of flowers.

RUST PROOF SNAPDRAGON

Rust, the most serious snapdragon disease, is found all over the United States on both greenhouse and outdoor plants. Dusty, chocolate-brown pustules (spore masses) are produced on the under side of the leaves and on the stems. Weekly applications of a good dusting sulphur during the rainy periods and fortnightly applications in dry weather will effectively control rust if a start is made early in the season. Keep sulphur off the flowers when in bloom. All Diamond Quality Snapdragons are of the newer Rust-Proof Strain and if Diamond Quality seed is used you need not worry about the rust disease.

Snapdragons may effectively be grouped with Scabiosa, Gladiolus, Larkspur, Delphinium, Clarkia and Chrysanthemum. *Varieties: Majus Rust Proof varieties, Butter Cup, canary yellow; Copper Shades; Pink Shades; Scarlet; Shasta White; Fiery Red and Mixed colors.* **Packets, 10c.**

SCHIZANTHUS: (*Poor Man's Orchid or Butterfly Flower*): (hA) Grows 1 to 1½ feet, and should be planted in sunny places. Erect, slender branched with bright green, finely divided leaves. Butterflylike flowers that are varicolored and blotched in many colors. Seed should be sown in early spring in rich, well fertilized, sandy loam. *Grouping*—excellent in masses; for the mixed border, combining with Gysophila, Virginia Blue Bells and Gerbera. *Varieties: May Blossom, rose pink; Brilliant Mixed.* **Packets, 10c.**

STOCKS: (*Gillyflower*)s (hA) Grows from 1 to 2½ feet tall, depending on type. Prefers sun with slight shade. Stiff and branching plants with smooth, bright green, oblong leaves. Blossoms are very fragrant, coming in small single or large double varieties, depending on type. Plant in well drained, rich, light loam; fertilize with complete plant food; pinch back young plants; plant close together, rogueing out single flowered plants later, if undesired. Use peat moss in preparing bed. *Grouping*—Very effective alone, or combined with Sweet Sultan, Violas and Pansies, Snapdragons, Daffodils, Tall Marigolds. *Varieties: Double Early Giant Imperial, rose; Elks Pride, purple; Canary Yellow; Blood Red; White and Mixed. Double Perfection Branching: Princess, white; La France, pink; Brilliant, blood red; Sapphire, violet; Creole, canary yellow; May Queen, pale blue; Rose Pink and Mixed. Virginia Stocks: Rose, Mixed. Evening Scented Stocks Mixed.* **Packets, 10c.**

SWEET WILLIAM *(Dianthus Barbatus):* (hP) 10 to 20 inches in height. Prefers sun or light shade. Forming a dense mat of light to dark green, often colored leaves, and dense, round headed cymes of hairy-petaled, medium sized flowers, blooming over a long period. Their large color range makes them excellent for cut flowers. *Grouping*—Useful as border plants and in mixed borders, combining, according to color with Snapdragons, Delphiniums, Stocks, Carnations, Phlox and Petunias. *Varieties: New Port Pink; Scarlet Beauty, orange red; Dark Crimson; White; Single Mixed and Double Mixed.*
Packets, 10c.

VERBENA: (hhP) Perennial, usually treated as an annual. Grows 6 to 8 inches but exceedingly spreading. Requires plenty of sunshine. Densely branching, with dark green, wrinkled, dissected leaves. Dense cluster of medium sized, salver-shaped flowers. Blooming from May often into winter. Grows in any type of soil, but best in rich, light, moderately fertilized loam. *Grouping*—Fine border plant; in parkings; foreground of shrub border; in the mixed border, combining with Petunias, Shirley Poppies, rose and red Snapdragons and Stocks. *Varieties: Golden Queen, golden yellow; Scarlet Defiance, orange red; Pink Shades; Blue Shades; Mixed.*
Packets, 10c

WALL FLOWER *(Cheiranthus Cheiri):* (hsP) Half shrubby perennial growing from 2 to 3 feet. Sun loving, but endures a little shade. Woody plant, with ribbed stem and dark green lanceolate leaves. Medium sized, mustardlike flowers in dense clusters. Seed in early fall and early spring. Grows in most types of soil but prefers well fertilized, light loam. *Varieties: (Perennials) Cheiranthus Cheiri, yellow shades; Siberian Wall Flower, brilliant orange (for rock plants); (Annuals) Blood Red; Paris Market, brown; Mixed; Double Early Wonder Mixed.*
Packets, 10c

ZINNIA FANTASY

Zinnias

ZINNIAS are of the easiest culture, thriving in almost any soil and under almost all conditions. While they respond readily to special treatment, they will also thrive under the most adverse conditions. It is this characteristic which makes them especially valuable in the hot, torrid regions of the Southwest and those sections which have lately been experiencing unusual conditions of drought. Natives of Mexico, they are happiest in the hot, dry conditions characteristic of their land of origin.

While seedling plants of Zinnias can be transplanted, they do best when the seed is sown directly in the soil where the plants are to flower. Never sow your Zinnia seed, however, until the soil is warm and danger of low temperatures is past. This would probably be from the 10th to 15th of June during normal years. For best results, provide a rich, deep soil and give water when needed. For the fullest development of the plant, the Giant types should be no closer than 18 inches apart each way, and the smaller growing kinds 10 to 12 inches apart. This will allow free branching for sturdy plant development, and will assure the production of large, well formed double flowers.

Zinnias are very fast growing annuals during the summer months and successive sowings can be made all through the summer and as late as the first of August.

Fantasy Zinnia is the most recent introduction and the best known in the semi-tall type. The plants are about 2½ to 3 feet in height, neat in habit, strong growing and very free flowering. The flowers are very informal in appearance, composed of a mass of shaggy, ray-like petals, which give a delicate, graceful effect, quite distinct from the stiff formal Zinnias to which we are accustomed. They are rounded in shape, of medium size, around 2½ to 3 inches, carried on good strong stems, and are excellent keepers. Fantasy is available only in a Mixture of lovely colors. **Packet, 10c.**

The California Giant strain is, in some ways, a companion type to the Dahlia Flowered. The plants are, however, taller than the Dahlia Flowered, reaching a height of 3 to 4 feet, with longer, strong stems, which are particularly adapted for use as a cut flower. The flowers themselves are very large and well formed, with a smooth topped, graceful appearance, the petals lying flat upon each other. We offer the following varieties: *Cerise Queen; Lavender Gem; Rose Queen; Violet Queen; Grenadier, dark red; Golden Queen; Daffodil, canary yellow.* **Packet, 10c**

The Dahlia Flowered type comes first to mind under the tall large flowered varieties. Plants in this group are strong and robust growing, about 3 feet tall, and bear many long stems of the showy, double, huge flowers, which closely resemble the Show type of Dahlia. This type is preferred for general garden use, producing a very brilliant mass of color, in bright, intense shades. The plants, however, are rather stocky and the stems not quite as long or as well adapted for cutting as the California Giant group. The flowers, themselves, are more or less cup-shaped in appearance; the petals, instead of lying flat upon each other, are incurved, producing an upstanding, stiff, somewhat coarse flower. The blooms, when well grown, will reach a diameter of six and sometimes seven inches. The general average, however, would be 4½ to 5 inches. Flowers are produced within about sixty days from the time of planting. We offer the following varieties: *Exquisite, light rose; Golden State, golden yellow; Crimson Monarch, deep crimson; Dream, rosy lavender; Scarlet Flame; Oriole, orange; Meteor, true red; Polar Bear, white; Mixed.* **Packet, 10c**

Lilliput of Pompon Zinnia, sometimes known as the Baby Zinnias. It is among the most popular for cut flower use and is steadily becoming more popular as a garden variety. The flowers are small, compact and symmetrical in shape, 1 to 1½ inches in diameter, borne in great quantities on neat, compact growing plants which usually reach a height of from 12 to 15 inches, but which may be forced in semi-shade or in the greenhouse to a height of 2 to 2½ or even 3 feet. Lilliput Zinnias have been found to be especially effective when used in combination with other flowers. We offer the following varieties: *Salmon Rose; Canary Yellow; Rosebud; Scarlet Gem; Crimson Gem; Golden Gem; Mixed.* **Packet, 10c**

Cut and Come Again of Pumila Dwarf Double type is one of the oldest double Zinnias known. It was the first really double Zinnia developed from the early single forms and has retained a certain amount of popularity ever since. Plants are about 12 to 18 inches in height. Flowers about 2 inches in diameter, well adapted for use as a cut flower. We offer the following varieties: *Crimson; Pinkie; Golden Orange; Salmon Rose; Mixed.* **Packet, 10c.**

Scabious Flowered Zinnia. The flowers are medium in size, 1½ to 2 inches across, fully crested in the center, with a row of guard petals flanking this crest. The plants are 2 to 2½ feet in height, branching and free flowering. Mixed Shades. **Packet, 10c**

Sweet Peas

Sweet Peas are essentially cool weather plants, and they quickly fade away if the temperature persists for long above 75. In the sea-cooled areas of the Pacific Northwest, sweet peas can be grown successfully throughout the summer. An early start is highly important. The plants must be well established before hot weather arrives, but if the heat is extreme and persistent, nothing will keep the plants growing vigorously, though it is possible to carry the plants through July and even later if a cheese-cloth shading is erected over the plants.

There are two methods of culture or training, natural and exhibition. The former gives quantities of fair-sized flowers on medium stems. All the laterals are allowed to remain, except that it is sometimes advantageous to cut back the leading growths when they harden, and allow the younger growths to carry on. When once the vines become woody, short-stemmed flowers are certain. Exhibition or cordon growing means fewer but giant flowers, sometimes as many as five and six, on stems 18 inches long. This system is not, however, worth while unless climatic or other conditions permit the plants to grow well into summer, as the finest flowers cannot be obtained until the plants attain a height of 4 feet or more. The plants should be planted 9 inches or so apart and allowed to carry two or three main growths. All side shoots or laterals that appear in the leaf-axils must be pinched out, leaving only the flower buds that likewise appear in the leaf-axils. So treated, the plants, if conditions permit, grow 8 feet or more, but can be kept down to a reasonable height by training. Exhibition plants need constant attention and much tying, especially if bamboo stakes are used for supporters. To insure continuous flowering, no seed pods should be allowed to develop.

All Diamond Quality sweet peas are of the Spencer strain, however, we offer two types of this strain. The early flowering Spencers and the standard varieties. The early flowering types will produce larger blossoms but do not bloom so profusely as the standard varieties.

EARLY FLOWERING SPENCER SWEET PEAS

Packet, 10c; 1 ounce, 45c. Postpaid.

Early Marine. The clearest true blue of all sweet peas. An extremely vigorous type.

Early Columbia. Lovely rose standard with light pink wings. Distinctive color and heavy cropper.

Early Giant Rose. Truly the best rose variety. Warm rose pink. Splendid form with extreme size of flower.

Early Harmony. Very popular clear lavender with large flowers, vigorous growth and fine color.

Early Oriental. Clear deep cream colored variety with black seeded center. Bears exceedingly wavy blooms.

Early Silver Blue. The color is described by its name. A beautiful shade of light silver blue.

Early Snowstorm Improved. Clear white blooms. Giant frilled flowers on long sturdy stems.

Early Apollo. Extremely long stems, bearing fine bold flowers of soft salmon cerise.

Early Vulcan. Vivid sun-proof scarlet. The most outstanding and best known early red.

Early White Harmony. Glistening pure white with vigorous long stems and large blossoms. The ideal florist variety.

Early Pride. A lovely deep cerise, beautifully tinged with scarlet. Even brighter than "Glitters".

Early Spring Song. Bright rose pink flushed salmon. The most brilliant cream pink and very popular.

Early Flowering Spencer Mixture. A well blended mixture, containing all of the above colors and additional shaded. **Packet, 10c; 1 ounce, 35c. Postpaid.**

SUPERB SPENCER SWEET PEAS

Packet, 10c; 1 ounce, 35c. Postpaid.

Pink and Cream

Fluffy Ruffles. Light cream pink.
Ascot. Clear light rose pink.
What Joy. Large, primroses, shaded to cream.
Pinkie. Large flowers in fours. Deep rose pink.
Mary Pickford. Cream pink, faintly tinted salmon.
Magnet. Rich cream pink.
Winnie Morse. Cream ground, lightly flushed rose pink, duplexed frilled.
Bon Bon. Rich pink.

Red and Maroon

Welcome. The most dazzling of all scarlets.
Charming. Brilliant, rosy cerise.
Flamingo. Orange scarlet cerise.
Sybil Henshaw. Giant. Deep crimson.
Doreen. Huge, bright, rose carmine.
Warrior. Rich oxblood maroon.

Orange and Salmon

Barbara. Beautiful shade of orange salmon.
Good Cheer. Charming begonia rose.
Gloriosa. Bright, orange scarlet.
Idyl. Giant flowers in fours. Salmon pink. Waved.
Royal Pink. Large, pure pink.
Celebrity. Brilliant orange.
Tangerine Improved. Rich salmon orange.
Pirate Gold. Deep golden orange.

Lavender, Blue and Mauve

Austin Frederick Improved. Pure lavender.
Powerscourt. Clearest lavender.
Fortune. Rich, dark blue.
Gleneagles. Lavender blue.
Olympia. Giant, rich purple.
Reflection. Clear cornflower blue.
Chieftain. Pure satiny mauve (deep lavender).

White and Picotee

Youth. Pure white edged soft pink.
Avalanche. Giant, pure white.
Standard Spencer Mixed. A splendid mixture, containing many of the varieties in our general list of Spencers. **Packet, 5c; ounce, 20c. Postpaid.**

Other Varieties of Annuals

Aster, American Giant Branching; mixed colors, double flowers, long stems.

Aster, Heart of France; red, 2 feet tall, good stems.

Aster, Early Wonder; white, light blue, dark blue, rose, crimson, mixed.

Aster Mum; like Chrysanthemum, white, rose, lavender, mixed.

African Daisy *(Arctotis);* red and orange shades, 1 foot tall.

African Lilac Daisy *(Arctotis Grandis);* grows 3 feet tall.

Acroclinium *(Everlasting Straw Flower);* double mixed.

Balloon Vine *(Love in a Puff);* fine climber, white blossoms, bears pods.

Balsam *(Lady Slipper);* double blossoms, pink, scarlet and mixed. 2 ft.

Blue Lace Flower *(Oidieus);* blue, grows 3 feet tall.

Browallia *(Amethyst);* Excellent for window boxes. Mixed colors.

Brachycome *(Swan River Daisy);* mixed colors.

Bartonia *(Blazing Star);* beautiful golden yellow, 3 feet.

Canary Bird Vine; climber with lovely yellow blossoms.

Cardinal Climber; strong rapid climber with blazing red flowers.

Cypress Vine *(Ipomoea Quamoclit);* fern-like foliage, scarlet or mixed.

Celosia Cristata *(Cockscomb);* crimson and mixed.

Celosia Plumosa *(Cockscomb, Feathery Type);* red, yellow and mixed.

Chinese Wool Flower *(Celosia Childsii);* crimson.

Cut Flower Mixture, (5c); A mixture of easy growing annuals. Assorted colors.

Daisy, African Mixed; grows 1 foot tall.

Everlasting Flowers; mixed varieties and colors.

Euphorbia *(Annual Poinsettia).*

Evening Primrose *(Biennial);* yellow shades, for rockery or border.

Four O'Clock *(Mirabilis Jalapa);* mixed colors, 2 feet.

Forget-Me-Not *(Myosotis);* Biennial:

VICTORIA—dwarf sky blue. 8 inches.
SEMPERFLORENS BLUE—blooms all summer.
ALPESTRIS—Blue and mixed colors.
STICK PIN—12 inches tall.

Gourds; large calabash, dipper **(10c).** Mixed **(5c).**

Hunnemannia *(Mexican Tulip Poppy);* yellow.

Hyacinth Bean *(Dolichos Lablab);* purple and white blooms. Climber.

Heliotrope *(Garden);* blue and mixed colors.

Humulus *(Japanese Hop);* white climber.

Helianthus *(Sunflower);* Double mixed, dwarf yellow chrysanthemum flowered.

Ice Plant; trailing for vases and rock work.

Job's Tears; produces little sprays, 12 inches.

Kochia Childsii *(Mexican Fire Bush);* green foliage turning to fiery red.

Lantana; Verbena-like clusters of flowers. 2 feet.

Linum *(Flower Flax);* Grandiflorum Rubrum, scarlet.

Lupin *(Annual);* dark blue, sky blue and mixed.

Mimulus Maschatus *(Musk Plant);* grows 6 in.

Moon Flower; white fragrant climber; night bloomer.

Mimosa *(Sensitive Plant);* small lilac blossoms.

Nicotiana *(Flowering Tobacco);* crimson and mixed. 3 feet.

Nemesia *(Nana Compacta);* blue, scarlet, orange and mixed.

Nemophillia *(Baby Blue Eyes);* blue and mixed. 6 inches.

Nigella *(Love in a Mist);* Miss Jekyll, double blue; Hispanica, blue *(Devil in a Bush).*

Portulaca *(Rose Moss);* double mixed, single mixed.

Physalis *(Chinese Lantern);* fine everlasting flowers.

Passiflora *(Passion Flower);* mixed colors.

Poppy, King Edward; single scarlet.

Poppy, Shirley; single mixed.

Poppy, Paeony Flowered; plain edged mixed.

Poppy, Tulip; deep scarlet.

Smilax *(Catchfly);* purple, white and mixed.

Statice Sinuata; blue, white, lavender, yellow, rose and mixed.

Strawbower *(Everlasting);* mixed.

Sweet Sultan *(Centaurea Moschata).*

Sweet Wivelsfield; similar to Sweet Williams. Mixed.

Wild Cucumber; rambling vine. Mixed.

Other Varieties of Perennials

Arabis *(Rock Cress);* white rock plant.

Anchusa *(Sea Bugloss);* blue flowers growing 6 ft.

Ampelopsis *(Virginia Creeper);* fine climber.

Ampelopsis *(Boston Ivy);* shiny green leaves.

Anemone *(Wind Flower);* St. Brigid double mixed.

Antigonon *(Mountain Rose Coral Bells).*

Armeria *(Sea Pink);* lilac rose—rock plant.

Agrostemma *(Rose of Heaven);* crimson, 12 in.

Asparagus Plumosus *(Asparagus Fern);* house plant.

Asparagus Sprengeri *(Emerald Feather);* house plant.

Begonia *(Wax Flower);* rose and bronze foliage.

Bachelor Button *(Centaurea Cyanus);* double rose, blue, mixed and single mixed.

Cineraria; semi-dwarf **(25c)**, star flower mixed **(25c)**, ordinary mixed **(15c).**

Canna; a greenhouse plant.

Cerastium Tomentasum *(Snow in the Summer);* white flowers.

Cobea Scandens *(Cathedral Bells);* blue climber.

Coleus; greenhouse plant, mixed colors **(15c).**

Chairanthus *(Siberian Wall Flower);* brilliant orange.

Dahlia; Coltness Mignon, mixed dwarf bedding; double mixed; single mixed.

Daisy, Bellis Monstrosa *(English Daisy);* double red, rose, white and mixed.

Daisy, Shasta; double **(15c)**, single **(10c).**

Dracena; greenhouse plant.

Gerbera *(Transvaal Daisy);* mixed colors **(15c).**

Geranium; Zonale mixed, Lady Washington **(15c).**

Heuchera *(Coral Bells);* crimson color **(15c).**

Kudzu Vine *(Jack and the Bean Stalk);* climber.

Linum *(Flowering Flax);* perennial blue, 2½ ft.

Lupins; Perennial mixed.

Nepeta *(Gray Catmint);* blue color.

Primula *(Primrose);*

MALACOIDES *(baby primrose)* light lilac.
KEWENSIS; golden yellow **(15c).**
VERIS *(cowslip)* mixed colors.
VULGARIS YELLOW *(True Yellow Primrose).*
OENTHERA; evening scented.

Pyrethrum; single mixed.

Pentstemon *(Beard Tongue);* mixed colors.

Poppy, Oriental; mixed colors.

Poppy, Sanford's Giant Mixed.

Poppy, Sunbeam Hybrids; mixed.

Rock Garden Mixture; wide variety of color.

Silene *(Catchfly);* purple, white and mixed.

Statice Latifolia; Perennial blue.

Sweet Rocket; white mixed.

Thunbergia *(Black Eyed Susan);* mixed shades.

Tritoma *(Red Hot Poker);* brilliant red blossoms.

Viola Jersey Gem; apricot, yellow **(25c)**, mixed **10c).**

Violet; beautiful blue.

Valieriania; red and mixed colors.

In order to have a really fine flower garden you must use

FERTILIZER

PEAT MOSS

SPRAYS and

DUSTS.

For these supplies and complete information about using them . . . see your local seed merchant. He can supply you with Fertilizer and Spraying Charts that will make your work simple and effective.

Common and Botanical Names of Flowers and Plants

Adam's Needle	**Yucca*
African Blue Daisy	*Arctotic Grandis*
African Golden Daisy	*Dimorphoteca*
African Lily	**Agapanthus*
Allegheny Vine	*Adlumia*
Amethyst	*Browallia*
Asparagus Fern	*Asparagus Plumosus*
Australian Pea Vine	*Dolichos Lignoses*
Baby Blue Eyes	*Nemophila Insignis*
Baby Primrose	*Primula Malacoides*
Baby's Breath	*Gypsophila*
Bachelor's Button	*Centaurea Cyanus*
Balloon Vine	*Love in A Puff*
Balsam Apple	*Momordica Balsamina*
Barberry	**Berberis*
Basket of Gold	*Alyssum Saxatile*
Beard Tongue	*Pentstamon*
Bell Flower	*Campanula*
Black Eyed Susan	*Thunbergia*
Blanket Flower	*Gaillardia*
Blanket of Snow	*Alyssum, Sweet*
Blazing Star	*Liatris*
Bleeding Heart	**Dielytra*
Blue Bottle	*Centaurea Cyannus*
Bluets	*Centaurea Cyannus*
Boston Ivy	*Ampelopsis Veitchii*
Boxwood	**Buxus*
Bridal Wreath	**Spirea Prunifolia*
Bush Poppy	*Hunnemannia*
Butterfly Bush	**Buddleia*
Butterfly Flower	*Schizanthus*
Butterfly Pea	*Centrosema*
Buttonwood	**Plantanus Orientalis*
California Poppy	*Eschscholtzia*
Canary Bird Flower	*Tropaeolum Canariense*
Candytuft	*Iberis*
Canterbury Bells	*Campanula Medium*
Cape Jasmine	**Gardenia Florida*
Cardinal Climber	*Ipomoea Quamoclit*
Cardinal Flower	*Lobelia Cardinalis*
Castor Oil Beans	*Ricinus*
Catchfly	*Silene*
Chinese Bell Flower	*Platycodon*
Chinese Lantern Plant	*Physalis Franchetti*
Clove Pink	*Dianthus Plumarius*
Cockscomb	*Celosia*
Columbine	*Aquilegia*
Cone Flower	*Rudbeckia*
Coral Bell	**Heuchera*
Cornflower	*Centaurea Cyanus*
Cornflower Aster	*Stokesia*
Cowslip	*Primula*
Crane's Bill	**Geranium*
Cypress Vine	*Ipomoea Quamoclit*
Daisy, English	*Bellis Perennis*
Dogwood	**Cornus Florida*
Dusty Miller	*Centaurea Gymnocarpa*
Dusty Miller	*Cineraria Candidissima*
Dutchman's Pipe	*Aristolochia*
Edelweiss	*Gnaphalium*
Elephant's Ears	**Caladium*
English Daisy	*Bellis Perennis*
English Primrose	*Primula Vulgaris*
Evening Primrose	*Oenothera*
Everlastting Pea	*Lathyrus Latifolius*
Everlastings	*Acroclinium*
Everlastings	*Helichrysum*
Everlastings	*Rhodanthe*
Everlastings	*Statice*
Fairy Lily	**Zephyranthes*
Feverfew	*Matricaria*
Flax	*Linum*
Fleur De Lis	**Iris Germanica*
Floss Flower	*Ageratum*
Flowering Maple	*Abutilon*
Flowering Tobacco	*Nicotiana*
Forget-Me-Not	*Myosotia*
Four O'Clock	*Mirabilis*
Foxglove	*Digitalis*
Garden Heliotrope	*Valerian*
Gentian	*Gentiana*
Geum	*Avens*
Globe Amaranth	*Gomphrena*
Gold Dust	*Alyssum Saxatile*
Golden Bell	*Forsythia*
Golden Chain	**Cytisus*
Golden Feather	*Pyrethrum Aureum*
Golden Rod	*Solidago*
Grass Pinks	*Dianthus Plumarius*
Harebell	*Campanula Carpatica*
Hollyhocks	*Athaea Rosea*
Honesty	*Lunaria*
Hops, Japanese	*Humulus*
Horn of Plenty	*Datura Cornucopia*
Hyacinth Bean	*Dolichos*
Ice Plant	*Mesembryanthemum*
Indian Shot	*Canna*
Jacobean Lily	**Amaryllis Formosus*
Japanese Pinks	*Dianthus Heddewegii*
Jerusalem Cherry	*Solanum*
Job's Tears	*Coix Lachryma*
Joseph's Coat	*Amaranthus Tricolor*
Kenilworth Ivy	*Linaria Cymbalaria*
Kudzu Vine	*Thunbergia Pueraria*
Lace Flower	*Didiscus*
Lady's Ear Drop	*Fuchsia*
Lady's Slipper	*Balsam*
Larkspur	*Delphinium*
Lavender	*Lavandula*
Leadwort	**Plumbago*
Lemon Verbena	**Aloysia Citriodora*
Lily of the Valley	**Convallaria*
Love Grass	*Nemophila*
Love in a Mist	*Nigalla*
Love Lies Bleeding	*Amaranthus Caudatus*
Maiden Hair Fern	*Adiantum*
Mallow	*Hibiscus*
Marvel of Peru	*Mirabilis*
Matilija Poppy	*Romneya Coulteri*
Meadow Rue	**Thalictrum*
Mexican Fire Bush	*Kochia*
Mexican Fire Plant	*Euphorbia Hetorophylla*
Mignonette	*Reseda*
Mock Orange	**Philadelphus*
Monk's Hood	**Aconitum*
Moonflower	*Iponoca*
Mountain Rose	*Antigonon*
Morning Glory	*Convolvulus*
Mourning Bride	*Scabiosa*
Musk Plant	*Mimolus Moschatus*
Myrtle	*Vinca Minor*
Nasturtium	*Tropaeolum*
Night Scented Stock	*Matthiola*
Orange Daisy	*Dimorphoteca*
Painted Tongue	*Salpiglossus*
Pampus Grass	**Gynerium*
Pansy	*Viola*
Passion Flower	*Passiflora*
Peach Bells	*Campanula Persicifolia*
Periwinkle	*Vinca*
Pheasant's Eye	*Adonis Aestivalis*
Pin Cushion	*Scabiosa*
Pinks	*Dianthus*
Polyanthus	*Primula*
Poppy	*Papaver*
Pot Marigold	*Calendula*
Prince's Feather	*Amaranthus Cruentus*
Quaking Grass	*Briza*
Ragged Robin	*Lychinis*
Red Hot Poker	*Tritoma*
Rock Cress	*Arabis*
Rocket	*Hesperia*
Rose Campion	*Lychnis*
Rose of Heaven	*Agrostema*
Rose of Sharon	*Althaea*
Sand Verbena	*Abronia*
Satin Flower	*Godetia*
Scarlet Sage	*Salvia Splendens*
Sea Bugloss	*Anchusa*
Sea Lavender	*Statice*
Sea Pink	*Armeria*
Smilax	*Myrsiphyllum Asparagoides*
Snapdragon	*Antirrhinum*
Sneezewort	*Achillea*
Snow of Summer	*Cerastium*
Snowball	**Viburnum*
Snow on the Mountain	*Euphorbia Variegata*
Speedwell	**Veronica*
Spider Plant	*Cleome*
Star of Bethlehem	**Ornithogalum*
St. Bruno's Lily	**Anthericum*
Stocks	*Gilliflower*
Stone Crop	*Sedum*
Straw Flower	*Acroclinium*
Straw Flower	*Helichrysum*
Straw Flower	*Rhodanthe*
Straw Flower	*Statice*
Summer Cypress	*Kochia*
Sunflower	*Helianthus*
Sunplant	*Portulaca*
Swan River Daisy	*Brachycome*
Sweet Rocket	*Hesperis*
Sweet Shrub	*Calycanthus*
Sweet Sultan	*Centaurea Imperialis*
Sweet William	*Dianthus Barbatus*
Tagetes	*Marigold*
Tassel Flower	*Cacalia*
Thimble Flower	*Gilia*
Thrift	*Armeria*
Tobacco	*Nicotiana*
Transvaal Daisy	*Gerbera*
Trumpet Flower	*Datura*
Trumpet Vine	*Bignonia*
Umbrella Tree	*Catalpa*
Venus' Looking Glass	*Campanula Speculum*
Violet	*Viola Odorata*
Virgin's Bower	*Clematis*
Virginia Creeper	*Ampelopsis Quinquefolia*
Wallflower	*Cherianthus*
Wind Flower	*Anemone*
Wormwood	*Artemesia Absynthium*
Yarrow	*Achillea*
Youth and Old Age	*Zinnia*

*Plants generally grown from bulbs or rooted stocks.

Information for Flower Gardens

FOR CUT FLOWERS

ASTERS — Crego; mixed, lavender, pink, crimson, white, Cal. giant mixed.
AGERATUM—blue, white.
BLUE LACE FLOWER.
CALENDULA — Chrysanthia, butter cup yellow, mixed, Ball's gold, Radio.
CALLIOPSIS—single mix, double mix.
CANDYTUFT—mixed.
CLARKIA—mixed.
CARNATION—double mix.
COSMOS—single mix, double mix.
GAILLARDIA—
GYPSOPHILAN — white, perennial mix.
LARKSPUR—rose, dark blue, mixed.
MARIGOLD — tall African, dwarf French, little brownie, Guinea gold.
NASTURTIUM—golden gleam, scarlet gleam, mixed tall, mixed dwarf.
PHLOX—mixed.
SCABIOSA—mixed.
SNAPDRAGON—tall mixed, copper king, ruby.
STOCKS—large flowering mixed.
ZINNIA—red, yellow, purple, mixed.
SWEET PEAS—white, salmon, rose, lavender, cerise scarlet, blue, maroon, yellow, pink, mixed.

CLIMBING VINES

BALLOON VINE—white.
CANARY BIRD VINE—yellow.
GOURDS—mixed.
MORNING GLORY—tall.
NASTURTIUM—tall mixed.
SCARLET RUNNER BEAN—scarlet.
SWEET PEAS—(see cut flowers).

WINDOW BOXES

AGERATUM—blue.
CALENDULA—yellow, gold, orange, mixed.
MIGNONETTE—grandiflora.
PANSY—mixed colors.
PETUNIA—mixed, rose.
STOCKS—dwarf mixed.

ROCKERIES

CANDYTUFT—mixed.
NASTURTIUM—tall mixed, scarlet, golden gleam.
SWEET ALYSSUM—white.
AGERATUM—blue, white.
CALENDULA—orange, yellow.
CANTERBURY BELLS—blue, white, pink.
FORGET-ME-NOTS—blue.
MARIGOLD—dwarf mixed.

SWEET SCENTED

AGERATUM—blue, white.
CANDYTUFT—white, purple, pink.
CARNATION—mixed colors.
MIGNONETTE—white, gold.
NASTURTIUM — scarlet, golden gleam.
PETUNIA — blue, crimson, white, violet.
SCABIOSA—mixed colors.
STOCKS—mixed colors.
SWEET ALYSSUM—white.
SWEET PEAS—all colors.
SWEET WILLIAMS—double mixed.
VERBENA—scarlet and mixed.

MEDIUM TALL Varieties

24 to 36 inches

BALSAM—rose, scarlet, white.
BLUE LACE FLOWER—lavender.
CALLIOPSIS—yellow.
COREOPSIS—yellow.
CHINESE LANTERN PLANT—scarlet pods.
CLARKIA—red, white, pink, purple.
EVERLASTING, HELICHRYSUM—yellow, pink, rose.
FOUR O'CLOCKS–red, white, striped.
GAILLARDIA ANNUAL — yellow, red.
GODETIA—rose, red.
GYPSOPHILA—annual white.
GYPSOPHILA—grand floral.
KOCHIA—Mexican fire bush.
LARKSPUR—deep blue.
MARIGOLD, African—orange, lemon.
MARIGOLD, French—orange, brown, striped.
PAINTED TONGUE, Salpiglossis—mixed.
PETUNIA—mixed colors.
PETUNIA—Rosy Morn.
POPPY, American Legion—Calif.
POPPY—tulip.
SALVIA—Splendens Zurich.
SCABIOSA, Mourning Bride—mixed.
SCARLET FLAX—red, Linum.
SNAPDRAGON—yellow, white, pink, copper.
SWEET WILLIAM—red, white, pink.
ZINNIA, Giant Dbl.—rose, orange, scarlet.
ZINNIA, Dahlia Fld.—rose, orange, scarlet.

TALL VARIETIES

36 inches and over

CASTOR BEAN—Riniculus.
COSMOS—white, pink, crimson.
HOLLYHOCKS—scar., mar., rose, white, yellow.
SWEET PEAS—red, pnk, white, blue, lavender.

HALF DWARF Varieties

12 to 24 inches

ASTER—white, lavender, pink, crimson, purple.
CARNATION—mixed.
CALENDULA—yellow, mixed.
CANTERBURY BELLS—blue, white, pink.
CHRYSANTHEMUM, Annual Single —yellow.
PINKS—red, pink.
PHLOX, Drummondi—rose, scarlet, violet, white, yellow.
STOCKS—pink, scarlet, white, yellow.
ZINNIA, Pompon—rose, orange, scarlet.

DWARF VARIETIES

Up to 12 in. For Edgings and Borders.
AGERATUM—blue.
CALIFORNIA POPPY—yellow.
CANDYTUFT — lilac, pink, purple, white.
FORGET-ME-NOT—blue.
MIGNONETTE, Sweet-white—gold.
NASTURTIUM, Dwarf—yellow, crimson, rose, salmon.
PANSY — black, blue, red, yellow, white.
SWEET ALYSSUM—white.
VERBENA—white, pink, red, blue.

Perennials and Biennials

CANTERBURY BELLS—blue, white, pink.
CARNATION, Mixed—red, rose, salmon.
CHINESE LANTERN PLANT—orange.
COREOPSIS LANCEOLATA Grand —yellow.
FORGET-ME-NOT—blue.
GAILLARDIA, Grand—maroon, orange.
HOLLYHOCKS—white, scarlet, maroon, yellow.
SWEET WILLIAM, Mixed–red, white, pink.

For Semi-Shady Places

BALSAM—rose, scarlet, white.
CLARKIA—red, white, pink, purple.
GODETIA—rose, red, pink.
LUPIN—blue, rose, yellow.
MIGNONETTE, Sweet—white, gold.
PANSY — black, blue, red, yellow, white.
SCARLET FLAX—red.
SWEET ALYSSUM—white.
SWEET WILLIAM—red, white, pink.

Vegetables

To the seasoned home gardener or farmer the next few lines will be of little importance, but every year there are more and more new members added to the national "Kitchen Gardeners' Club" that we believe it will help these people greatly if a few fundamental facts are stated before we enter into the description of the various varieties of Diamond Quality vegetable seed.

As to soil and situation, make the best of what you have. Few of us can pick and choose the ideal site, soil and other factors so emphatically emphasized by most writers on gardening. Yet it is advisable to know what these are so that they may be recognized and as nearly as possible established.

If a choice of exposure is possible, choose a gentle slope toward the east, the southeast or the south, because these are the early facings of the sun. Other conditions being equal, vegetables on such slopes will mature earlier and be of higher quality. Supplementing this, if possible, protect the area on the north, west and northwest, from cold winds. This can often be afforded by woods, buildings, evergreen hedges or tight-board fences.

Always the ground should be well drained, either naturally or artificially, for well drained land is warmer and earlier. It is also more retentive of moisture, which constanty ascends from lower levels bringing the plants supplies of necessary plant food.

Though the gardener must often make the best of the soil he has, where a choice is possible it is best governed by the physical character of the soil because this is the hardest to modify.

Clay, adobe and heavy soil do not readily absorb moisture, or easily assimilate plant food; yet they are retentive of both. As they retain moisture, they are cold and late in spring; they are also heavy and sticky and hard to work when wet. However, they can be made into very good growing soil by working a sufficient amount of peat moss or some other good humus.

Very light sandy soils are easy to work, even when wet. They are loose and friable, readily receptive but not retentive of water and plant food, which consequently tend to wash out and be lost. This type of soil can be improved greatly by also adding peat moss or other good humus.

In order to produce the finest vegetables it is important to have fertile soil so that crops can be grown as rapidly as possible. There are three basic elements in any good plant food (see Now about Fertilizer, page 40).

Asparagus

The young, tender shoots of asparagus have been used as a vegetable for over two thousand years. It can be grown in practically every part of the United States except in areas of extreme heat.

Asparagus is the most permanent of all vegetable crops, because of this it is obvious that the home gardener should plan to place it in a separate bed that can stand for years. No soil is too rich for asparagus, it will grow in any ordinary good garden soil but will not produce tender stalks without liberal supply of commercial fertilizer and plenty of moisture.

For the home gardener it is usually too troublesome to start asparagus from seed, for a moderate price you can purchase dormant one-year crowns or roots, thus hastening ultimate production for several years. It takes 60 to 70 roots for 100 foot row. Rows should be 4 to 5 feet apart.

If planting from seed, it is best to drill thinly in rows 15 inches apart during March or early April, thin out to two inches apart the strong plants. Transplant during February, setting the roots 1 foot apart in rows 4 feet apart. The rows should be 10 to 12 inches deep and running north and south, getting the sun on both sides. Cover the roots about 3 inches and as the plants grow, continue to cover until rows are filled.

Giant Washington. The genuine rust resistant strain, stalks long, rich dark green. Thick and heavy of excellent tender quality.

Packets, 5c; oz., 15c, postpaid

Mary Washington. A special selection of Giant Washington. Somewhat earlier and larger but equally resistant to rust.

Packets, 5c; oz., 15c, postpaid

Other Varieties. Argenteul and Palmetto.

Packets, 5c; oz , 15c, postpaid

Artichokes

Artichokes originally came from the Southern Mediterranean. It is primarily a winter vegetable and is produced in certain parts of California where the areas are frost free in winter and cool and foggy in summer.

In the producing areas suckers are used in place of seed so as to insure winter production of heads. Although the plant is a Perennial, without the peculiar climatic conditions the production of artichokes is not advisable. They may however, be grown in many frosty areas if the proper precautions are taken.

Seed may be sown at any time except during the hottest weather when all seed beds require special care. Soil should be a free moist loam and seed should be planted an inch deep. Transplant when six inches high in rows four feet apart each way. Save offsets from best plants for new supply as artichokes never come true to seed. When transplanting seedlings reject those with spindly leaves. The best edible variety is **Green Globe. Packet, 5c; oz., 75c, postpaid.**

Jerusalem Artichokes are adapted to nearly all sections west of the Cascade Mountains and the irrigated sections east of the Cascades. Used most extensively as stock feed for hogs, cattle, sheep and horses. For best results they should be fed with grain or legume hay, or both. This type of Artichoke requires the same soil and cultural methods as potatoes. 500 to 800 cut tubers are required to plant an acre. **10 lbs., $1.00, postpaid.**

Beans

The Bean is a native of the far east and has been cultivated from the earliest time. No doubt the bean is used more generally than any other vegetable both for its delicious edible green pod and the nutritious seed.

Beans are classified into two groups. The Dwarf or Bush variety and the Pole or Climbing type. These two groups are again divided into two distinct types. The Green Podded varieties and the Wax or Yellow Podded varieties.

Nearly all the bush varieties are 10 to 12 days earlier than the pole, which makes them a favorite among the home and market gardeners.

Beans will not stand frost and should not be planted until two weeks after the last killing frost. It takes about a pound of seed for a row 100 feet and should be planted in hills with approximately 3 or 4 seed to the hill. For the most tender and delicious beans they should be picked when about two-thirds grown.

For a succession crop plant every ten days or two weeks until about the first of August. Seed sown after this time will probably be caught by early frost. Bush varieties mature from 45 to 70 days depending on the heat, pole varieties take 75 to 80 days.

Cultivate frequently but never do this in the early morning or just after a rain. All evidence points to the foliage of the bean as dangerously likely to spread disease if implements or clothing brush past it while it is wet. Keep this in mind when picking the crop.

LIMA BEANS

Oregon Pole Lima. Proven over many years to be well adapted to our cool Northwest climate. Strong, vigorous grower, bearing continuously until frost. Pods best when turning yellow.

Packet, 10c; ½ pound, 20c; pound, 30c

Other Varieties. Burpee Bush Lima, Henderson Bush, Fordhook Bush.

GREENPOD POLE VARIETIES

Oregon Giant Greenpod. Keeps producing until killed by frost. Large, fleshy pods, 10 to 12 inches in length, stringless, light greenish yellow splashed with red.

Packets, 10c; ½ pound, 20c; 1 pound, 35c

Kentucky Wonder. Pods are very fleshy, saddle-backed, fine grained and stringless. Early prolific, vigorous climber so stout poles are needed. Average 8 to 10 inches in length and are light green in color.

Packet, 10c; ½ pound, 20c; pound, 30c

Other Varieties. Tall or London Horticulture, White Creaseback or Blue Lake, Lazy Wife, Dutch Case Knife.

WAX POD POLE VARIETIES

Kentucky Wonder Wax. Very early. Starts bearing when scarcely higher than a bush bean and continues until frost. Pods are fleshy, long, crimpled, creamy yellow and practically stringless.

Packet, 10c; ½ pound, 20c; pound, 30c

KENTUCKY WONDER BEANS

Golden Cluster Wax. Long tender pods. Brilliant yellow in color and fairly early. Bears prolifically during warm weather.

Packet, 10c; ½ pound, 20c; pound, 30c

GREENPOD BUSH VARIETIES

Stringless Greenpod. By far the best of this type. Very early and heavy producer. Pods 5 to 6 inches long, round and exceedingly fleshy. Absolutely stringless and tastiest of all beans.

Packet, 10c; ½ pound, 20c; pound, 30c

Stringless Black Valentine. Pods very fleshy, round and saddle back. Produce large crops. Always tender. **Packet, 10c; ½ pound, 20c; pound, 30c**

Other Varieties. Dwarf Horticultural or Cranberry, Stringless Refugee, Bountiful, Canadian Wonder, Red Valentine, Tendergreen, Broad Windsor, Lady Washington and Little Navy.

WAX POD BUSH VARIETIES

Improved Golden Wax. Vigorous and highly productive. Reaches table condition in 50 days. Pods are deep golden, about 5 inches in length, broad, oval and stringless.

Packet, 10c; ½ pound, 20c; pound, 30c

Davis Wax. Pods are long, rust resistant and very tender. The dry, white, kidney-shaped beans are excellent for baking.

Packet, 10c; ½ pound, 20c; pound, 30c

Other Varieties. Stringless Wax, Pencil Pod Black Wax, Brittle Wax, Prolific Black Wax, Round Pod Kidney Wax and Wardwell's Kidney Wax.

DETROIT DARK RED BEETS

Beets

Beets are one of the easiest of vegetables to grow, doing well in almost every type of garden soil except those too rocky or hard to allow proper root development. A rich sandy loam easily worked is ideal.

Of the many on the market the best varieties of beets for the ordinary garden are Detroit Dark Red, Market Gardener, Crosby's Egyptian and Early Wonder. Early Wonder is one of the quickest from seeding to harvest averaging in good soil and favorable climate about 42 days. The other varieties take from 45 to 50 days.

If you are to cultivate with a hoe or wheel hoe the rows should be 12 inches apart. Make the drills deep enough to allow the seed to be covered with an inch of soil. It is always a good method to sow beet seeds thicker than the final stand is to be and then thin out the plants enough to allow proper root development. Plant about 10 to a foot of row or about 2 ounces to a 100 foot row. It is advisable to use *crude naphthalene flakes* in the rows at the time of planting seed for protection against soil pests.

Cultivate frequently and deeply at first being careful not to disturb the young seedlings, however. When the plants get to be 4 inches high you must decide whether you finally want a great many with fairly small roots or fewer and larger ones. Thin to 2 inches apart if you want small roots and 5½ inches apart for the larger ones.

Beets are rich feeders and the soil should be correspondingly rich especially if quick growth is to be secured and it should be, slow growth means tough roots while quick growth means juicy and tender ones. A commercial fertilizer is advised for best results.

P. S. Co. Market Gardener. Extra early and remarkable for its fine quality and rapid growth. Tops small, roots deep red, globe-shaped, flesh dark red, fine grained and tender. It is preferred by market gardeners because it matures evenly, stands long and does not split.

Packet, 5c; oz., 15c; ¼ lb., 35c; 1 lb. $1.00

Detroit Dark Red. Due to its uniformity in size and smooth handsome appearance it is very popular with canners as well as home gardeners. Roots are deep red, globe-shaped, with small tap root. This variety is entirely free of white rings and retains its tasty flavor after it grows to full size. **Packet, 5c; oz., 15c; ¼ lb., 35c; 1 lb., $1.00**

Early Blood Turnip. An improved variety over the blood turnip Beet. Top large, roots dark red and nearly round; flesh deep red with lighter zoning; sweet, crisp and tender. We recommend these beets for summer and fall use.

Packet, 5c; oz., 15c; ¼ lb., 35c; 1 lb., $1.00

Extra Early Egyptian. One of the best for forcing. Tops small, roots dark red, rounded top, flat on bottom, with very small tap root. Flesh sweet and tender.

Packet, 5c; oz., 15c; ¼ lb., 35c; 1 lb., $1.00

Other Varieties. Crosby Egyptian, Early Wonder, Early Eclipse. **Pkt., 5c; oz., 15c; ¼ lb., 35c; 1 lb., $1**

MANGEL WURZEL

Should be sown at the rate of 5 to 6 pounds per acre and thin to 10 inches apart in the row.

Mangels should be planted early in the spring in rows 2½ feet apart. The seed should be 1 inch apart in the rows and covered by 1½ inches of soil firmly pressed down. When plants are three inches high begin to thin until roots are 10 inches apart. One ounce of seed plants about 100 feet and 5 pounds to the acre.

P. S. Co. Heavy Cropper. One of the largest yellow Mangels. Easily pulled as it grows two-thirds above the ground. We recommend this variety because of its outstanding quality.

Pkt., 5c; oz., 10c; ¼ lb., 25c; 1 lb., 60c

Half Sugar Mangel. Double the yield of Sugar Beets. Roots large, smooth, cream white with few rootlets. Tops medium size.

Packet, 5c; oz., 10c; ¼ lb., 20c; 1 lb., 50c

Danish Sludstrup. Roots long, reddish yellow, good yielder growing well above the ground.

Packet, 5c; oz., 10c; ¼ lb., 20c; 1 lb., 50c

Other Varieties of Mangels. *Yellow Giant Intermediate* or *Gate Post*—Flesh white, grows half above the ground. *Golden Tankard* — Tankard shaped, flesh yellow zoned white. *Red Eckendorf*—Thick cylindrical, blunt, grows mostly above ground. *Yellow Eckendorf*—Same as Red Eckendorf aside from color. *Mammoth Long Red*—Roots large, slightly tapering, color light red, flesh white with rose tinge.

Packet, 5c; oz., 10c; ¼ lb., 20c; 1 lb., 50c

NURSERY DIVISION

PORTLAND SEED CO.

109 S. E. ALDER STREET

Vegetable Plants

FOR TRANSPLANTING

ASPARAGUS. Giant Washington, Mary Washington. 1 year plants; 12 for 40c; 50 for 75c; 100 for $1.25; 1000 for $7.00. 2 year plants; 12 for 50c; 50 for $1.00; 100 for $1.50; 1000 for $10.00. Prices postpaid.

CABBAGE. All varieties listed under cabbage seed, state kind desired. 12 for 25c; 100 for $1.50; 1000 for $10.00. Prices postpaid.

CAULIFLOWER. All varieties listed under cauliflower seed, state kind desired. 12 for 30c; 100 for $2.00; 1000 for $16.00. Prices postpaid.

CELERY. All varieties listed under celery seeds, state kind desired, 12 for 25c; 100 for $1.50. Prices postpaid.

HOP ROOTS. 3 for 25c; 12 for 75c; 100 for $3.50. Prices postpaid.

HORSERADISH ROOTS. (Crowns) 3 for 25c; 12 for 75c. (Commercial cuttings) 100 for $1.25; 1000 for $10.00. Prices postpaid.

KALE. Thousand Headed. 12 for 25c; 100 for $1.50; 1000 for $10.00. Prices postpaid.

LETTUCE (Transplants). All varieties listed under lettuce seed, state kind desired. 12 for 25c; 100 for $1.50; 1000 for $10.00. Prices postpaid.

PEPPER. Chinese Giant and California Wonder. 12 for 30c; 100 for $2.00; 1000 for $10.00. Prices postpaid.

RHUBARB. Riverside Giants. Each 20c; 12 for $1.50; 100 for $7.50. Prices postpaid.

TOMATOES. All varieties listed under tomato seed, state kind desired. 12 for 30c; 100 for $2.00; 1000 for $16.00. Prices postpaid.

Berry Plants

The Pacific Northwest is one of the outstanding berry sections of the world. With soil and climate conditions being ideal for the raising of these much enjoyed fruits we highly recommend, where space is sufficient, that every one have a berry patch. Below we offer the leading varieties of berry plants at extremely low prices.

BOYSENBERRY. A new variety produced by crossing blackberries, raspberries and loganberries. The flavor is a very pleasing blend of each of the three varieties. In has few and soft seeds. The great size is hard to explain—1 inch in diameter by 1½ inches long. Is consistently a heavy bearer and comes into good bearing the next year after planting. Boysenberry is a vigorous grower and should not be planted closer than 6 feet apart. The fruit season is longer than most varieties, lasting about two months. Each 15c; 7 for $1.00; 15 for $2.00; 50 for $6.00; 100 for $10.00. Prices f.o.b. Portland, Ore. Add for postage or freight.

BLACKBERRIES. Eldorado. Himalaya Giant (Evergreen everbearing). 1 year plants, each 15c; 10 for $1.25; 100 for $10.00. Prices f.o.b. Portland, Ore. Add for postage or freight.

BLACK CAPS. One year plants, each 15c; 10 for $1.25. Prices f.o.b. Portland, Ore. Add for postage or freight.

CURRANTS. Oregon shipments only. **Perfection.** Largest, most prolifice. Bright red, rich flavor, mild, subacid. Each 20c; 10 for $1.75. Prices f.o.b. Portland, Ore. Add for postage or freight.

GOOSEBERRIES. Oregon shipments only. **Oregon Champion,** large green, sweet, fine. Each 20c; 10 for $1.75. Prices f.o.b. Portland, Ore. Add for postage or freight.

LOGANBERRIES. Two year plants. Each 20c; 10 for $1.75; 100 for $15.00. One year plants. Each 15c; 10 for $1.25; 100 for $10.00. Prices f.o.b. Portland, Ore. Add for postage or freight.

RASPBERRIES. **Lloyd George.** Each 10c; dozen 75c; 100 for $4.00. Prices f.o.b. Portland, Ore. Add for postage or freight.

STRAWBERRIES. Diamond Quality Strawberry Plants are large, vigorous, healthy and heavy rooted. They have large full crowns. Carefully grown and are free from disease and pests. We dig as ordered and pack for shipment in well-ventilated crates. Grown from our select strains and always true to name; no substitution allowed without instructions from the purchaser. All prices, except noted, 25 for 35c; 100 for 95c; 500 for $4.25; 1000 for $7.50. Prices f.o.b. Portland, Ore. Add for postage or freight.

Banner. A beautiful dark red. An exceptionally sweet variety and a real heavy bearer.

New Oregon. Most uniform and heaviest yielding main crop strawberry. Large, firm, of fine form, average 15 to the quart box. Brilliant deep rich red, with glossy varnished appearance. Color extends through to center and they are never hollow. Flavor is suggestive of wild berry; an early bearer and holds up in size and quality throughout the season.

Marshall. One ofthe best all-round strawberries. Very large and fine flavored throughout the entire bearing season. A splendid market and table berry.

Giant Gem (King of Everbearers) Enormous Berries! Big, firm, fine-flavored. Because of its outstanding performance, this variety is now the leading Everbearing Strawberry. It is very productive and the berries are large, smooth, good quality, a bright red and ripen evenly (do not have green tips). They will commence bearing in 90 days after planting and continue until severe freezing, thus giving you fresh strawberries this summer and fall. Next year, they will bear spring, summer and fall. They are perfect flowering, so can be planted alone. 12 for 50c; 25 for 75c; 50 for $1.25; 100 for $1.95; 500 for $8.75; 1000 for $16.00. Prices f.o.b. Portland, Ore. Add for postage or freight.

YOUNGBERRY. A real special! These berries are a cross between the loganberry and the dewberry. An exceptionally fine flavored, very productive berry. Bears early and commands the highest market prices. The fruit colors well and is exceptionally sweet and large. Color, jet black. Ten plants of this variety will make a row eighty feet long. Transplants, each 15c; 10 for $1.25; 100 for $10.00. Prices f.o.b. Portland, Ore. Add for postage or freight.

GRAPES. **Campbell's Early.** Nearly round, black. **Concord.** Large, black grape. Bunches compact. **Delaware.** Bright red. **Lucile,** Niagara. Large, roundish, uniform white. **Worden** (Improved Concord). Fruit black and large, skin tender. Vigorous plant. Two year plants, each 25c; 3 for 65c; 12 for $1.75. Prices f.o.b. Portland, Ore. Add for postage or freight.

Try the New
GIANT GEM
STRAWBERRY
« Tasty »

FRUIT TREES

AUTUMN AND WINTER APPLES

Baldwin. Large, rounded, deep bright red. Very productive.

Delicious. Fruit equals name in every respect. Keeps until April.

Grimes Golden. Rich golden yellow. Flesh tender and juicy.

Jonathan. Long lived and an early bearer. Fine quality.

Northern Spy. Large, round greenish-yellow. Requires good soil.

Rose Beauty. Fruit large, red, striped.

Spitzenberg. Yellowish, with broken stripes of bright red.

Wealthy. Medium, whitish-yellow, shaded with deep red.

Winesap. Fruit red, large, round-oblate, good, late keeper.

Winter Banana. Market fruit. Pale yellow with pink blush.

Yellow Newtown. Fruit yellow, medium size. tender, crisp, excellent quality.

First Grade. Two years (branched) Each 60c, 10 for $5.00. One year, 4 to 5 feet, Each 45c, 10 for $3.50. Prices packed ready for shipment. Add for postage or freight.

SUMMER APPLES

Gravenstein. Fruit medium in size, striped with crimson, splendid for table and cooking. Tree hardy, healthy and productive.

Red Astrachan. Fruit bright crimson, round. Tree large, hardy and very productive.

Yellow Transparent. Fruit bright yellow, conical, large, subacid, very early.

First Grade. Two years (branched) Each 60c, 10 for $5.00. Ane year, 4 to 5 feet, Each 45c, 10 for $3.50. Prices packed ready for shipment. Add for postage or freight.

CRABAPPLE

Hyslop. Red striped. Very early, juicy, crisp.

Red Siberian. Yellow with scarlet cheek. Bears abundantly.

Transcendent. Very large and excellent for tasty cider.

First Grade. Two years (branched) Each 60c, 10 for $5.00. One year, 4 to 5 feet, Each 45c, 10 for $3.50. Prices packed ready for shipment. Add for postage or freight.

APRICOTS

Moorpark. Excellent for canning and drying. Freestone .

Royal. Sweet, rich, juicy. Good dryer and canner.

The Lewis. Best flavored. Very hardy wth juicy fruit.

Tilton. Large, Rich color, high flavor. Very productive.

First Grade. Two years, 4 to 6 feet, Each 60c, 10 for $5.00. One year, 3 to 4 feet, Each 40c, 10 for $3.00. Prices packed ready for shipment. Add for postage or freight.

CHERRIES

Bing. Large, dark brown or black. Very fine tasty and sweet.

Black Republican (Lewelling). Large, black and sweet.

Lambert. Largest size. Deep, rich red. Fine firm flesh.

Royal Ann. A magnificent cherry of the largest size.

Waterhouse (Long Stem). Small tasty fruit, light red.

First Grade. Two years, 4 to 6 feet, Each 70c, 10 for $6.00. One year, 4 to 6 feet, Each 60c, 10 for $5.00. Prices packed ready for shipment. Add for postage or freight.

PIE CHERRIES

Kentish. Nearly black. Medium to large sizes.

Large Montmorency. The most popular sour cherry grown.

Late Duke. Large, light red. Excellent taste, sub-acid.

May Duke. Large, rich, dark red, sub-acid. May bearer.

First Grade. Two years, 4 to 6 feet, Each 70c, 10 for $6.00. One year, 4 to 6 feet, Each 60c, 10 for $5.00. Prices packed ready for shipment. Add for postage or freight.

PEACHES

Early Crawford. Fruit yellow with beautiful blush. Freestone. Tree large and vigorous.

Elberta. Fruit yellow, large, handsome. Freestone.

Early Elberta. Same as above, except larger fruit and earlier bearing.

Hale's Early. Extra fine quality. Freestone.

Late Crawford. Large, yellow, dark red, juicy, freestone.

Mayflower. Red, freestone, and extremely early.

Rochester. Fruit yellow, flesh yellow, freestone. Tree hardy and productive.

First Grade. Two years, 4 to 6 feet, Each 60c, 10 for $5.00. One year, 3 to 4 feet, Each 40c, 10 for $3.00. Prices packed ready for shipment. Add for freight or postage.

AUTUMN VARIETIES PEARS

Bartlett. Fruit large, thin skin, clear yellow, soft flush. Trees large and productive.

Beaurre D'Anjou. Fruit large, greenish to yellow; very good in quality.

Beurre Bosc. Fruit large, with long tapering neck; greenish-yellow, often overlaid with very heavy russet. Highly flavored.

Fall Butter. Yellow, sweet and meaty. September.

First Grade. Two years, 4 to 6 feet, Each 60c, 10 for $5.00. One year, 4 to 6 feet, Each 50c, 10 for $5.00. Prices packed ready for shipment. Add for postage or freight.

WINTER VARIETIES PEARS

Winter Bartlett. Undoubtedly one of the few pears of recent introduction of real merit.

Winter Nelis. Medium; skin yellowish-green; flesh yellowish-white. Fine grained. December.

First Grade. Two years, 4 to 6 feet, Each 60c, 10 for $5.00. One year, 4 to 6 feet, Each 50c, 10 for $4.00. Prices packed ready for shipment. Add for postage or freight.

PLUMS

Bradshaw. Reddish-purple. Adheres partially to stone.

Coe's Golden Drop. Large, light yellow. Late September.

Damson Shropshire. Dark purple; very firm; flesh green.

Maynard. Dull red, rich and sweet; sturdy; quick growing.

Peach Plum. Very large. Skin brownish red; freestone; bears in July.

Blood Plum. Large, dark red from skin to pit; bears well.

Satsuma. Bears in August; flesh deep blood red; great favorite for jams.

Washington. Fruit light yellow, round-oval, sweet, excellent quality.

Yellow Egg. Very large, deep golden, rather acid. Preferred for canning.

First Grade. Two years. 4 to 6 feet, Each 60c, 10 for $4.00. One year, 4 to 6 feet, Each 40c, 10 for $3.00. Prices packed ready for shipment. Add for postage or freight.

PRUNES

Hungarian. Very large, dark red, juicy and sweet.

Italian (Fellenberg). Dark purple, flesh greenish yellow.

New Standard. Trees large. Enormous yield. Freestone.

Petite (French). Medium, egg-shaped. Violet purple; sugary.

First Grade. Two years, 4 to 6 feet, Each 60c, 10 for $4.00. One year, 4 to 6 feet, Each 45c, 10 for $3.00. Prices packed reeady for shipment. Add for postage or freight.

QUINCE

Pineapple. Flavor is suggestive of pineapple. Resembles the orange quince, making superior jelly. Can be eaten raw, and has a most exquisite and delicious flavor. September. Fire Grade. One year, 3 to 5 feet, 70c, 10 for $6.00. Prices packed for shipment. Add for postage or freight.

CLIP THIS COUPON

This Coupon with a NURSERY ORDER is good for a FREE

Packet of Nasturtiums

Nut Trees

ALMOND (Nut Bearing). Almonds can be grown successfully in many sections of Oregon and Washington. We can supply most of the leading varieties at prices listed. Nonpariel. Nut sweet, shell thin. First Grade. One year, 4 feet. Each 60c. 10 for $5.00. Prices packed ready for shipment. Add for postage or freight.

BUTTERNUT. A beautifully formed tree bearing a rough coated nut of most attractive flovor. Well known to the Middle West. Succeeds fairly well in the Pacific States. Each $1.10. Price packed ready for shipment. Add for postage or freight.

FILBERTS. **Barcelona.** Magnificently large nut from Spain. First Quality. Can be grown as low standard tree or bush. **DuChilly.** The largest filbert on the Pacific Coast. Nuts are broad, full-fleshed and sweet. DuChilly is a good pollenizer for Barcelona. **White Aveline.** This, used with the DuChilly, considered best varieties for planting with Barcelona for pollenizer. First Grade. 3 to 4 feet. Each 70c. 10 for $6.00. 2 to 3 feet. Each 60c. 10 for $5.00. Prices packed ready for shipment. Add for postage or freight.

GRAFTED WALNUTS (Soft Shelled). We offer a splendid strain, grafted on 4-year California Black Walnuts. Sturdy, thrifty trees with big, fibrous roots. The best to plant. Comes to bearing much younger than seedling walnuts. Can be shipped by express or truck. First Grade. 3 to 4 feet. Each $1.00. 10 for $9.00. 4 to 5 feet. Each $1.50. 10 for $14.00. 6 to 8 feet. Each $2.00. 10 for $18.00. Prices packed ready for shipment. Add for postage or freigh.t.

Annual Flower Plants

We list these plants under their general classification, for variety desired please consult the write-ups for each, under flower seeds. If no variety is stated, we will send mixed colors. Prices on all plants, with the exception of Pansies are: 50c per dozen, postpaid.

Asters	Clarkia
Alyssum	Cosmos
Ageratum	Godetia
Calendula	Larkspur
Lobelia (dwarf and trailing)	
Mignonette	Salpiglossis
Marigold	Scabiosa
Petunia	Stocks
Phlox	Snapdragons
Portulaca	Verbena
Salvia	Zinnia
Pansies ($1.00 per doz.)	

Geraniums

SINGLE GERANIUMS

20c each; $2.00 dozen. Postpaid

Single Geraniums are probably the most popular bedding plants of the time. Their free growth and continuous flowering proclivities serve to keep them always in the front rank. Beds of one color have been very popular of late, and, indeed, such are hard to beat for fine display.

ALBION. Beautiful free flowering white variety, as pure in color as driven snow. Always in bloom.

JACQUERIE. Rich, vivid crimson; immense trusses. The best of the dark geraniums for bedding as it blooms freely, stands the sun well and is a rarely beautiful flower.

MAXINE KAVOLEVSKI. Fine large trusses of orange-scarlet flowers. The nearest approach to yellow in Geraniums.

MILDRED RIVAL. Pure rose-pink with conspicuous white blotch on the upper petals; flowers beautifully formed and the largest of its color.

MRS. A. BLANC. Rich salmon color, shaded to peach. A fine bedding Geranium.

MRS. E. G. HILL. Very large trusses of single florets; color, clear salmon, with a white center; one of the finest and most distinctive varieties.

IVY-LEAVED OR TRAILING

20c each; set of any 4 for 75c. Postpaid.

This class of Geraniums have a trailing or vining habit producing richly colored flowers with quite as much freedom as the upright growing sorts. They are unexcelled for planting in hanging baskets, tubs, and window boxes as well as being suitable for planting in the open ground.

CHARLES TURNER. Deep bright pink flowers of wonderful crispness. Upper petals feathered maroon.

COL. BADEN POWELL. Flowers of the largest size abundantly produced in good sized trusses. Color pearl-white shaded with apple blossom. Dark blotches on upper petals.

GARDEN GLORY. Bright scarlet suffused with rose. Upper petals veined with crimson.

MADAME THIBANT. Lovely soft pink flowers; upper petals feathered with crimson-maroon. Undulated florets, in large trusses. Luxuriant waxy foliage.

DOUBLE GERANIUMS

20c each; $2.00 dozen. Postpaid.

Like the single Geraniums, these also make admirable bedding plants.

ALPHONE RICARD. One of the most famous double scarlet bedding varieties. Flowers of immense size and very brilliant in color.

BEAUTE POITEVINE. Most popular salmon-pink bedding varieties, a wealth of blooms all season.

EDMOND BLANC. Rich purple-violet flowers borne in great freedom. Distinct and beautiful.

FIAT. Bright salmon with flesh colored shadings. Immense trusses. Always in bloom.

MADAME RECAMIER. Snowy white flowers in large trusses produced in great profusion. Strong, vigorous grower.

S. A. NUTT. The best of the rich, dark crimson varieties; trusses massive and lasting. The most popular sort for bedding all over the country.

New Carnations

20c each. Set of any 6 for $1.00. Postpaid.

BELLE WASHBURN. Flowers very large and massive with finely fringed petals. Strong non-bursting calyx. Stems stout and wiry, holding the flower erect, color rich dazzling scarlet.

EARLY ROSE. Delicate flesh pink of exquisite shade. Finely formed, nicely fringed and very fragrant.

HARVESTER. Finely formed pure white flowers produced on wiry stems. The most popular white.

MRS. C. W. WARD. Color soft pure rose; flowers large and well-formed; it is a very healthy and free-blooming.

MATCHLESS. A wonderful new white variety. Large massive flowers on strong upright stems.

SPECTRUM. Very large, finely fringed flowers produced in great freedom. Color bright scarlet and full petaled.

Fuchsias

20c each. Set of any 6 for $1.00. Postpaid.

DOUBLE SORTS

ROSE PHENOMENAL. Largest Fuchsia grown; Phenomenal tuberous petals a bright coral red.

BEAUTY OF EXMOUTH. Rich purple corolla streaked with scarlet at base. Vivid scarlet sepals.

STORM KING. Superb double white variety; tube and sepals bright scarlet.

SINGLE SORTS

ANNE EARLE. Tube and sepals waxy white; corolla single clear carmine.

LORD BYRON. Corolla blackish purple streaked scarlet. Dwarf and free blooming. Sepals scarlet.

TRAILING QUEEN. Of a drooping or trailing habit; a fine plant for hanging baskets, vases, etc; tubes and sepals rosy scarlet, corolla violet-purple.

CHOICE TREE ROSES
COLORS
RED, WHITE, PINK and YELLOW
$2.00 Ea. F. O. B. PORTLAND

Chrysanthemums

RARE NEW JAPANESE CHRYSANTHEMUMS

20c each. Set of any 3 for 50c. Postpaid.

GOLDEN GLORY. Bright kolden yellow spheres of fine size and form. Broad waxy petals.

PINK TURNER. Flowers of same size and shape as the popular William Turner, but of a beautiful silvery pink color.

WILLIAM TURNER. Immense globe shaped flowers of snowy whiteness. Notorious for the size of its blooms and its general satisfactory performance as a cut flower variety.

YELLOW TURNER. Great globes of primrose-yellow, otherwise identical with the popular William Turner. Does well in the garden.

EARLY JAPANESE CHRYSANTHEMUMS

20c each. Set of any 6 for $1.00. Postpaid.

BETSY ROSS. Globe-shaped blooms of grand size. Color pure snow-white without the least shading.

BRONZE QUEEN. Rich golden bronze color shaded with gold. Strong growing and very free.

CHRYSOLORA. Large incurved golden yellow flowers produced freely on strong rank growth.

EARLY FROST. Pure snowy white flowers, the inner petals incurving and outer ones reflexing into a fine shaped bloom.

OCONTO. Rank in growth, free in bloom, flowering in early October this fine white variety is very popular.

W. H. WAITE. Deep bronze shaded with gold. Of finest incurved form and splendid size. Grown extensively by florists for cutting.

HARDY POMPON CHRYSANTHEMUMS

This small or button class of Chrysanthemums is becoming very popular for garden culture and are greatly admired for their graceful little blooms in a cut state. These sorts are perfectly hardy and will flower profusely in the garden with less care than the larger flowered varieties. 20c each. Set of any 6 for $1.00. Postpaid.

FRED PEELE. Orange with bronze eye. Extra good.

NUGGETS. Bright yellow flowers of small size in large sprays.

IRENE. Pure white button shaped flowers on upright wiry stems. Does finely in open ground.

JULIA LA GRAVERS. Rich velvety crimson flowers in great profusion late in the season.

AUTUMN GLINTS. All the shades of Autumn foliage in this beautiful flower.

CAPT. COOK. Pink. Double large button type.

ENCHANTING KOREAN HYBRID CHRYSANTHEMUMS

25c each; $2.50 dozen. Postpaid.

CERES. Lovely combination of old gold, chamois-yellow, and soft coppery bronze. The mature flower petals appear as if dusted with gold.

DAPHNE. An exquisite blending of daphne-pink, with an underlying sheen of lilac-rose, enhanced with prominent golden stamens in the center. Flowers carried in graceful sprays, are especially frost-resistant.

LOUISE SCHLING. A very effective new single red variety with flowers over three inches in diameter.

MERCURY. The opening flower is oxblood-red, changing to coppery bronze, and finally to an exquisite blend of old rose and salmon which is retained long after the flower matures.

Lantanas

15c each. Postpaid.

AMEIL. Richly colored sort with umbels of little floret orange-red on the outer edge and golden yellow in the center. Covered all summer with its brilliant flowers.

COUNTESS BIENCOURT. Bright rose-pink, each floret centered with primrose-yellow. Each floret with orange-colored throat.

French Cannas

For a brilliant show all summer long, nothing can excel the new French Cannas. Easiest culture, growing finely in any ordinary garden soil and producing quantities of immense spikes of bright colored flowers until frost. Dig the roots and store like Dahlias. Each 20c. Set of any 6 for $1.00. Postpaid.

KING HUMBERT. Immense spikes of bloom of bright orange-scarlet streaked with crimson.

HUNGARIA. A great variety with beautiful clear rose flowers. Through old, still one of the most desirable.

GLADIOFLORA. Orange-pink with dashes of golden yellow on each petal. Quite distinct from all other sorts.

NOKOMIS. Vivid crimson flowers with silky sheen on the petals. Handsome bronze colored foliage. Grows four feet high.

THE AMBASSADOR. Brilliant cherry red flowers in magnificent trusses. The bronze leaved President.

THE PRESIDENT. Immense trusses of giant crimson-scarlet flowers on heavy stalks. The finest of all Cannas.

WYOMING. Immense spikes of orange colored flowers. Bronzy purple foliage. A giant in growth.

Begonias

FLOWERING BEGONIAS

15c each. Set of any three for 40c. Postpaid.

The most satisfactory plants for house culture obtainable. Of easiest culture their waxy flowers produced in much profusion together with their handsome foliage make them most desirable subjects for the window gardens.

ALBA PICTA. Dark green leaves heavily dotted with white. Panicles of white flowers. Of bushy growth.

ARGENTEA GUTTATA. Handsome erect growing; wine-colored leaves with silvery white spots. Cluster of pure white flowers.

SANDERSONI. Dark green leaves clothing upright branches bearing bright scarlet flowers in drooping clusters.

PICTA ROSEA. Waxy green leaves with silvery white spots. Racemes of pretty pink flowers.

REX BEGONIAS

25c each. Three for 65c. Postpaid.

They are favorite because of their beautiful leaves, variously marked with spots, colored bands, and metalic shadings. Mixed colors.

TUBEROUS BEGONIAS

Blooming continually throughout the summer, the flowers often being over six inches in diameter, and rival in color the most brilliant Geranium flower. As a bedding plant outdoors, or for pot culture in the house, these Begonias cannot fail to give satisfaction if given partially shaded situation.

Single Flowered Varieties. Five colors; white, pink, yellow, scarlet, and crimson. Each 25c. Set of 5 colors, $1.00. Postpaid.

Double Flowered Varieties. White, pink, yellow and red. Each 25c. Set of 5 colors, $1.00. Postpaid.

Gloxinias

Showy flowering bulbs for the window garden or conservatory. Potted in rich garden loam and placed in a light window they will develop into shapely plants covered with graceful large flowers of velvety texture.

Mixed colors, 25c each. Postpaid.

Tigridias

(Shell Flower)

Mexican bulbs producing showy, large oddly shaped blooms of exotic beauty. Well suited to planting in the mixed border. Handle the same as Gladiolus. 18 inches high; flowering all summer.

PAVONIA GRANDIFLORA. Crimson and yellow shades. Each 10c; Dozen $1.10 Postpaid.

New Patented Roses

Prices as noted. Add 10c each for postage and packing.

ANGELS MATEU. Orange-rose. Extra-large, full-petaled. Color is deep coral or deep old-rose with a light flush of orange. Fragrance like ripe blackberries. $1.50 each.

BLAZE. Acclaimed by the nation as the only hardy everblooming scarlet climber. $1.00 each.

ECLIPSE. The inteernational sensation of the year. Long, streamlined bud enhanced by ornamental sepals, of rich gold without shading. $1.50 each.

FEU PERNET-DUCHER. Lovely yellow rose. Blooms have from 80 to 100 petals of radiant sunshine yellow. $1.00 each.

LOUIS BRINAS. Pointed orange-copper buds opening slowly to stary flowers with high centers. When fully open the color is soft old rose flushed with gold. $1.50 each.

ROCHEFORT. Hundred-petaled blooms of orange-old-rose open 3½ inches wide, full to the center. Very fragrant $1.50 each.

TEXAS CENTENNIAL. Bud is long-pointed, opening into a large moderately fragrant flower carried on a long, strong stem. Open flower is nopal-red, with a dainty shade of gold; center of the flower lighter red, toning to dark pink as the bloom ages. $1.00 each.

COUNTESS VANDAL. Long pointed bud, distinctive shadings of coppery-bronze suffused with soft gold. A continuous "movie" developing new beauty at all times during its long life. $1.00 each.

Baby Roses

These Baby Roses (Polyantha grow everywhere and require very little care. They are especially fine in solid beds and for borders. Also ideal for cemetery planting. Constantly in bloom from early summer until freezing. If you think you cannot grow roses, plant some of these. All will bloom this summer.

50c each; $5.00 dozen. Add 10c each for postage and packing, or $6.00 per dozen Postpaid.

CECILE BRUNNER. The Sweetheart Rose. Lovely light pink. Grows 18 inches tall.

ELSE POULSEN. Magnificent Rose that is always in bloom from June until freezing, with great clusters of beautiful apple-blossom pink flowers. Grows 3 feet tall. Makes a wonderful flowering hedge.

IMPROVED LAFAYETTE. Semi-double light crimson flowers are produced in immense clusters all season. Grows 2½ feet tall.

TEA, HYBRID TEA AND EVERBLOOMING ROSES

50c each; $5.00 dozen, except where noted. Add 10c each for postage and packing, or $6.00 per dozen Postpaid.

AMI QUINARD. Blackish buds open to semi-double flowers of velvety crimson-maroon with a soft black luster. Has splendid old-rose fragrance. Strong, upright plant.

ANGELE PERNET. Most brilliantly colored mandarin and yellow rose in existence; large.

AUTUMN. Most extraordinarily colored rosebud — burnt brown—on strong stems for cutting. Foliage glossy and very dark green and resistant.

BETTY UPRICHARD. Semi-double, salmon-pink flowers stained with copper-pink on the outside.

CALEDONIA. Flowers large, white, full, double, high centered.

CATALONIA. Buds are deep rich carmine stained with orange and open to a 50petaled flower of velvety orange-scarlet, vermilion, cochineal-red. Rich fragrance.

CHAS. P. KILHAM. Very double flowers and buds of blazing scarlet-orange, opening to bright orange-pink with fiery center.

CONDESA DE SASTAGO. Distincly two-toned, coppery pink inside and golden reverse.

DAINTY BESS. Single rose of a soft rose pink color.

DUQUESA DE PANARANDA. Rose produces two distinct types of flowers; During the summer the pointed buds are a blend of apricot-orange and dark pink, opening to splendid bloms of coppery apricot. In the autumn great brownish buds open slowly to finely formed flowers of cinnamon-peach.

EDITH CLARK. Little deep red buds and a semi-double open flower. The plant is of medium growth but blooms freely.

EDITH NELLIE PERKINS. Long pointed buds on long stems open into perfect flowers of orange-cerise outside and inside of salmon overspread gold. Grows vigorously and blooms freely.

ETOILE DE HOLLANDE. Finest dark red rose for general purposes.

GOLDEN DAWN. Bud rich straw yellow, flushed old-rose; flower very double, sunflower-yellow, passing to lemon-yellow with age.

GOLDEN RAPTURE. Pure yellow buds of ideal form; beautiful, large, double flowers which last without fading. Splendid for cutting and bedding.

HADLEY. Large flowers of an intens rich dazzling crimson-scarlet shading to velvety crimson. Very attractive, well shaped blooms.

IMPERIAL POTENTATE. Large, deep rose-pink, vigorous, profuse.

JOANNA HILL. Very double bloom with Indian-yellow center surrounded by gold buff petals.

LADY MARGARET STEWART. Copper-orange buds, opening to bright golden yellow flowers.

MARGARET McGREDY. Brilliant red petals on hinges of deep gold. Buds upright. Seldom out of bloom. Upright plant, very hardy.

McGREDY'S IVORY. Long bud with greenish markings, opening in ivory-white; perfectly shaped double blooms, sweet scented.

McGREDY'C SCARLET. Large flowers are brilliant scarlet with orange base and the upper portions of the petals are lightly washed crimson.

MEV. G. A. VAN ROSSEM. Exceedingly fragrant rose of orange and bronze, beautifully veined.

MME. ED. HERRIOTT. Original of all the bright orange-flame varieties.

MRS. E. P. THOM. Fine buds open into perfectly shaped flowers of rich yellow.

MRS. HENRY BOWLES. Very large, double, lasting blooms of rosy pink shaded salmon on long, strong stems.

MRS. PIERRE S. DU PONT. Buds are reddish gold, opening into beautiful flowers.

MRS. SAM McGREDY. Large, fairly double bloom of orange-salmon, with a suffusion of gold. Vigorous, healthy plant. One of the best of the tribe of Irish Roses.

OSWALD SIEPER. Nicely formed buds of pale cream which open to big, loose, double flowers of creamy white. Rich tea fragrance.

PRESIDENT HOOVER. Maroon, orange, and gold.

SIR HENRY SEAGRAVE. Lemon-yellow. Perfectly formed buds of lemon-yellow open to spiral flowers of same soft shade. Has decided lemon fragrance.

SISTER THERESE. Its long-pointed buds are chrome-yellow, heavily marked with carmine; the open flower is rich daffodil-yellow and holds its color well. Blooms come freely on splendid cutting stems.

SOUTHPORT. Exceedingly brilliant scarlet color. Bud of lovely form; does not have many petals and opens rather quickly into a good-sized, loose, open, perfumed flower which holds its brilliant color well.

TALISMAN. Fragrant bloom of glowing golden yellow outside, and stained with copper-red and orange rose on the inside of the petal.

VILLE DE PARIS. Buds of bright yellow which open into fadeless double blooms.

Use...
ACME DUSTING SULPHUR
For Rose Mildew

HARDY CLIMBING AND RAMBLER ROSES

50c each; $5.00 dozen, except where noted. Add 10c each for postage and packing, or $6.00 per dozen Postpaid.

CLIMBING AMERICAN BEAUTY. Strong healthy, vigorous grower, frequently making shoots from 10 to 12 feet long and good-sized flowers for a climbing Rose that blooms so freely. Color a pleasing rose-pink.

CLIMBING CHARLES P. KILHAM. Rich brilliant Oriental red, flushed with orange and glowing scarlet. Long, pointed buds opening to high centered, sweetly tea-scented, perfect blooms.

CHAPLIN'S PINK CLIMBER. Rich double pink blooms with just a touch of salmon when first expanding. Makes a most effective color display unequalled by any other of this type.

EMILY GRAY. Real yellow climbing rose with long, pointed buds and light orange-yellow blooms changing to pale orange as they expand.

MME. GREGOIRE STAECHELIN. (The Spanish Beauty). Vigorous grower with good foliage. Long, shapely buds are carried on 12 to 14-inch long stems. Shapely, semi-double, fragrant flowers of an iridescent pearly pink tipped with crimson.

JACOTTE. Deep orange-yellow, tinted coppery red. Good sized, semi-double, very lasting flowers with moderate fragrance. Borne several together on a long stem.

PAUL'S SCARLET CLIMBER. Most popular of all climbing Roses. Vivid scarlet of large size, produced in clusters of from 3 to 20 flowers on long, strong stems.

PRIMROSE. A real hardy yellow rambler retaining its glowing primrose yellow color. Moderately fragrant. 2 or 3 blooms for a spray. Fine for cutting.

SCORCHER. Enormous ruffled flowers of rich vermilion-red.

PRES. HOOVER CLIMBER. Same flower as bush flower.

Evergreen Shrubs

ABELIA (Grandiflora). Small, glossy leaves and tubular-shaped flowers of a blush-pink clor. Shipping size 15 inches. $1.00 each, f.o.b. Portland, Ore. Add for postage or freight.

ACUBA (Japanes Laurel). **Japonica Variegated.** Yellow spotted leaves. **Japonica Green.** Dark, glossy green leaves. Shiping size 12-18 inches. $1.00 each, f.o.b. Portland, Ore. Add for postage or freight.

AZALEA. **Crimson.** Loaded in early spring with mases of scarlet flowers. Thrive best in cool, moist situation. Excellent for massing or in front of other shrubs. Shipping size 6-8 inches. Small plants each 75c, f.o.b. Portland, Ore. Add for postage or freight.

DAPHNE (Japan) **Pink Daphne.** Blooms early spring. Shipping size 12-15 inches. Each $1.50, f.o.b. Portland, Ore. Add for postage or freight.

CAMELIA (China and Japan). Small trees with shining waxy leaves and flowers. Thrive best in partial shade. Shipping size 12-15 inches. Each $1.50 f.o.b. Portland, Ore. Add for postage or freight.

COTONEASTER (C. Franchetti: China). Pink flowers, red berries in the fall. Shipping size 12-15 inches. Each 50c. 24 to 30 inches. Each 75c, f.o.b. Portland ,Ore. Add for postage or freight.

C. HORIZONTALIS (Trailing). Nearly deciduous. Leaves small, turn red in winter. Berries red, stay all winter. Excellent for terrace; hardy. Each 75c, f.o.b. Portland, Ore. Add for postage or freight.

LAURUSTINUS. Dark green foliage. Small, white flowers. Very hardy. Shipping size 15-18 inches. Each $1.00, f.o.b. Portland, Ore. Add for postage or freight.

HEATHER (Irish Belle). Purple, bell-shaped bloom in July or August. 12 to 18 inches. Each 75c, f.o.b. Portland, Ore. Add for postage or freight.

HEATHER (Mediterranean. Pink, bell-shaped bloom in fall and winter. 10 to 12 inches. Each 75c, f.o.b. Portland, Ore. Add for postage or freight.

PYRACANTHA (Lalandi). Sturdy, bushy shrubs; orange berries. 18-24 inches. Each 75c, f.o.b. Portland, Ore. Add for postage or freight.

Coccinea. Red Berries. Very robust type. 18-24 inches. Each 75c, f.o.b. Portland, Ore. Add for postage or freight.

ENGLISH HOLLY (Grafted). Shiny, spiny, dark green leaves. Bright red berries. Compact bush. 12-15 inches. Each $1.50, f.o.b. Portland, Ore. Add for postage or freight.

Hedge Plants

BARBERRY (**Japanese Thunberg's**). Arching growth; yellow flowers; red berries; foliage has beautiful coloring in fall. 18-24 ins. Each 40c. Dozen $4.00, f.o.b. Portland, Ore. Add for postage or freight.

BARBERRY (**Red Leaved**). Foliage is a rich, lustrous, bronzy red at all times. In fall foliage becomes orange, scarlet and red shades with scarlet berries. Should be planted in full exposure to sun. 15-18 inches. Each 75c, f.o.b. Portland, Ore. Add for postage or freight.

BARBERRY (**Wilsoni**). Dwarf. Has glossy green leaves, long spines, yellow flowers, red berries. 12 to 15 inches. Each 75c, f.o.b. Portland, Ore. Add for postage or freight.

BOXWOOD. Small leaves of dense and compact growth. 8 to 12 inches. Each 30c; dozen $3.00, f.o.b. Portland, Ore. Add for postage or freight.

LAUREL. English (Cerasus). Growth shrub-like, with broad dark green leaves. Two feet apart for dense hedge. Shipping size 12 inches. Each 30c; dozen $3.00, f.o.b. Portland, Ore. Add for postage or freight.

PRIVIT. **California.** Our best plant for hedges. Plant in double row two feet apart, 6 inches between plants. Shipping size 24-30 inches. Ten for $1.00. Per hundred $7.50, f.o.b. Portland, Ore. Add for postage or freight.

PRIVIT. **English** (Hardy). Leaves smaller. Shipping size 24-30 inches. Ten for $1.00. Per hundred $7.50, f.o.b. Portland, Ore. Add for postage or freight.

Vines and Creepers

CLEMATIS (**Jackmanii.**) Large purple flowers; requires rich, deep soil; plenty of water; perfect drainage; sunny position. Each $1.00. Postpaid.

CLEMATIS (**Mme. Edw. Andre**). Red flowering. Each $1.00. Postpaid

CLEMATIS (**Paniculata**). White Flowering. Each 75c. Postpaid.

HONEYSUCKLE (Hall's Japanese). Vigorous grower; white flowers changing to yellow. Blooms June to August. Each 75c. Postpaid.

IVY (**Boston**). Fine for brick or stone wall; quick growing. Each 75c. Postpaid.

IVY (**English**). Evergreen shrubby vine; large, dark green leaves. Each 75c. Postpaid.

JASMINE. Splendid for sheltered places. Pink or white flowers. Each 75c. Postpaid.

VIRGINIA CREEPER. Vigorous grower; large leaves turn bright colors in fall. Each 75c. Postpaid.

WISTARIA (Sinesis(. Purple or white flowers in long, drooping racemes. Each 75c. Postpaid. Grafted vines. Each $1.50. Postpaid.

Deciduous Shrubs

DELIVERIES MADE FROM NOVEMBER UNTIL MAY

ALMOND (Prunus). Pink flowering. Dwarf shrub. Shipping size 18-24 inches. Each 75c. Postpaid.

ALTHEA (Rose of Sharon). Late summer blooming, colors pink, white or red. Shipping size 30-36 inches. Each 80c. Postpaid.

AZALEA (A. Mollis). In early spring is covered with gorgeous flowers before the leaves appear. Colors mostly orange, yellow and salmon pink. Shipping size 12-18 inches. Each $1.50. Postpaid.

BUDDLEYA (Magnifica: Summer Lilac). Slender branches that terminate in flowers of lavender blue. Shipping size 24-30 inches. Each 75c. Postpaid.

CALYCANTHUS (Floridus: Sweet-scented Shrub). Double, dark crimson flowers, very fragrant and blooms all season. Shipping size 15-18 inches Each 75c. Postpaid.

DEUTZIA **(Gacilis).** Low-growing, slender branches, covered with a profusion of flowers. White with blush of pink in the bud. Shipping size 12-15 inches. Each 75c. Postpaid.

DEUTZIA **(Lemoinei).** Flowers in large cluster of pure white. Grows to 6 feet high. Shipping size 24-30 inches. Each 75c. Postpaid.

FORSYTHIA (Golden Bell). Blooms in dense masses of Golden-yellow flowers in early spring. Shipping size 30-36 inches. Each 75c. Postpaid.

HONEYSUCKLE (Bush: Pink Tartarian). Bushy, upright growth. Flowers freely. Red and orange berries stay on until fall. Shipping size 18-24 inches. Each 75c. Postpaid.

HYDRANGEA (Japanese Otaksa) Blue and pink. Shipping size 12-18 inches. Each 75c. Postpaid.

TREE HYDRANGEA (Paniculate Grandiflora). Pure white, afterwards changing to pink. Shipping size 24-30 inches. Each $1.00. Postpaid.

LILAC (Syringa Vulgaria). Common. Single, white or purple. Shipping size 30-36 inches. Each 75c. Postpaid. Grafted. Double or single, white or purple. Shipping size 2-3 feet. Each $1.50. Postpaid.

MOCK ORANGES (Syringa). White, creamy flowers, very fragrant. Shipping size 30-36 inches. Each 75c. Postpaid.

QUINCE (Japanese Flowering). Scarlet flowers. Shipping size 18-24 inches. Each 75c. Postpaid.

SPIREA **(Bridal Wreath).** Blooms during May and June; long sprays of large white flowers. Very hardy and ornamental year round. 60c. Postpaid.

SPIREA **(Crimson).** Deep red flowers. Blooming all summer. Shipping size 18-24 inches. Each 60c. Postpaid.

SPIREA **(Thunbergii).** Shipping size 18-24 inches. Each 60c. Postpaid.

SPIREA **(Van Houetti's).** Flowers white in clusters. May. Shipping size 24-30 inches. Each 60c. Postpaid.

SNOWBALL. Flowers globular, pure white, in May. Shipping size 18-24 inches. Each 60c. Postpaid.

TAMARIX (African). A tall slender irregular shrub with feathery foliage and small delicate pink flowers. 3 to 4 feet high. $1.00. Postpaid.

WEIGELIA. Free-flowering shrub. Shipping size 24-30 inches. Pink or varigated. Each 75c. Postpaid.

Deciduous Trees

SHADE and ORNAMENTAL

BECHTEL'S FLOWERING CRAB. Large, double, fragrant, pinkish, rose-like flowers, covering entire tree. Apple-like foliage turns bronze in fall. Forms a rounded compact, dwarf tree. $1.00, f.o.b. Portland, Ore. Add for postage or freight.

BIRCH. **White,** common, 5-6 feet. Each $1.00, f.o.b. Portland, Ore. Add for postage or freight.

BIRCH. **Cut Leaf** (B. Alba). Silvery-white bark, slender, drooping branches. 5-6 feet. Each $1.25, f.o.b. Portland, Ore. Add for postage or freight.

CATALPA. **Western.** Splendid trees. White flowers, bright foliage. 5-6 feet. Each $1.25, f.o.b. Portland, Ore. Add for postage or freight.

CATALPA BUNGEI. Dwarf, dense, round-headed variety. Much in outline likee the popular Bay trees, but is hardy and better adapted for the garden, 5-6 feet. Each $3.00, f.o.b. Portland, Ore. Add for postage or freight.

CHERRY (Japanese Rose-flowered). Pendulous cluster of small rose-pink flowers. Effective at ends of vistas or with trellis support. Early bloomer. Two year trees, 5 to 6 feet, each $2.00. One year trees, 4 to 5 feet, each $1.50, f.o.b. Portland, Ore. Add for postage or freight.

DOGWOOD (Pacific). Creamy white flowers; grows in any soil or climate. Vigorous growth; leaves highly colored in fall. 5 to 6 feet. Each $1.50, f.o.b. Portland, Ore. Add for postage or freight.

ELM (American). Tall, wide spreading tree, light gray trunk. 6 to 8 feet. Each $1.50. 5 to 6 feet. Each $1.00, f.o.b. Portland, Ore. Add for postage or freight.

HAWTHORNE. Paul's Double Scarlet. 5-6 feet. Each $1.25. 6-8 feet. Each $1.50, f.o.b. Portland, Ore. Add for postage or freight.

HORSE CHESTNUT (A. Hippocastanum). Tall; large divided leaves; long panicles of fragrant, snowy-white flowers. Good shade tree. 3 to 6 feet. Each $1.50,f.o.b. Portland, Ore. Add for postage or freight.

MAPLE. Norway. 5-6 feet. Each $1.00, f.o.b. Portland, Ore. Add for postage or freight.

MOUNTAIN ASH. Europena. White flowers, red berries. 5 to 6 feet. Each $1.25, f.o.b. Portland, Ore. Add for postage or freight.

OAK (Red Leaved). Tall; stout spreading branches; lobed leaves; beautifully colored. 5 to 6 feet. Each $2.00, f.o.b. Portland, Ore. Add for postage or freight.

PEACH (Flowering). Large, single and double, light, deep red, and cerise and maroon flowers. 3 to 4 feet. Each $1.00, f.o.b. Portland, Ore. Add for postage or freight.

PLUM (Bleireiana). Purple tinted foliage, reddish bronze later. Medium size, semi-double fragrant flowers. Early bloomer. 4 to 6 feet. Each $1.25, f.o.b. Portland, Ore. Add for postage or freight.

PLUM (Thundercloud). Dark purple foliage, pink flowers. 4 to 6 feet. Each $1.00, f.o.b. Portland, Ore. Add for postage or freight.

POPLAR (Carolina). Broad, wide-spreading branches; dark bark; 6 to 8 feet. Each 75c, f.o.b. Portland, Ore. Add for postage or freight.

POPLAR (Lombardy). Straight, narrow, spirelike. 6 to 8 feet. Each 75c, f.o.b. Portland, Ore. Add for postage or freight.

WEEPING WILLOW (Babylon). Long, slender, drooping branches; bright green leaves. 6 to 8 feet. Each $1.00, f.o.b. Portland, Ore. Add for postage or freight.

Peat Moss

For Your Flowers, Garden, and Lawn Use Peat Moss as a Mulch

While some water is lost from the soil by seepage, the greatest loss is by evaporation. A layer of loose, fluffy material on top of a soil will greatly check evaporation. Premier Swedish Peat Moss supplies just the material for such a layer or "mulch."

Applied from 1 to 5 inches deep it conserves soil moisture, keeps the soil cool during hot weather, and prevents erosion either by washing or blowing. In winter Premier Swedish Peat Moss protects plant roots from severe cold. The use of Premier Swedish Peat Moss all summer prevents the growth of weeds by smothering them out, thus reducing garden labor.

The whole subject can be stated in a sentence: There is no easier, more certain way to more beautiful gardens than through the ample, intelligent use of Premier Swedish Peat Moss.

Price $3.00 Per Bale

Subject to change without notice

F.O.B. PORTLAND

Gladiolus

TEN BEST CUT FLOWER VARIETIES

All blooming size 1¼ inches. Priced per dozen Postpaid.

BETTY NUTHALL. Warm coral pink with yellow throat markings. Very good propagator; an excellent cut flower variety. Dozen 35c.

EVERYN KIRTLAND. Tall pink with darker throat. Dozen 35c.

GIANT NYMPH. Popular light pink with pretty throat markings of lighter color. Dozen 35c.

GLORIANA. Finest pure salmon with yellow throat. Dozen 35c.

GOLD EAGLE. Fine golden yellow, very early. A favorite with the florists. Dozen 35c.

GOLDEN DREAM. Large late pure deep yellow. A desirable variety for every collection. Dozen 35c.

LOS ANGELES. Light pink with fine lines of deep rose marking the throat. Good forcer. Dozen 35c.

MRS. LEGION DOUGLAS. Unusually large begonia rose or strawberry red. Striped with scarlet. Very showy. Dozen 40c.

PFITZER'S TRIUMPH. Immense bright orange-scarlet florets on fine stalks. Dozen 40c.

CHAS. DICKENS. Bright radiant purple. Tall and lovely. Doz. 40c

NEW VARIETIES

ALBATROS. A very fine pure white of large size. 3 for 20c.

BYRON L. SMITH. Very lovely, refined lavender pink, with cream throat. 4 for 20c.

BLUE TRIUMPHATOR. Pale lighht blue of large size and tall spike. 3 for 25c.

COMMANDER KOEHL. A beautiful large dark scarlet, a most attractive variety. Each 10c.

CORONATION. Soft light salmon, shading to cream and creamy yellow deep in throat. 3 for 25c.

CORYPHEE. A lovely soft rose pink with many open blooms. 3 for 25c.

DEBONAIR. Salmon pink with deep cream throat. Tall and lovely 3 for 25c.

GOLDEN MEASURE. Tallest deep yellow. 4 for 20c.

HEAVENLY BLUE. Lovely aniline blue. One of the best and tallest light blues. 4 for 25c.

HINEMOA. Very striking smoky rose with large clear yellow blotch. Each 10c.

IRENE. Salmon rose, lighter throat. Rich and lovely. Each 10c.

JUBILEE. Huge lavender pink. Always admired. 3 for 25c.

LOYALTY. Pure yellow, deeper throat. Strong husky plant. 3 for 20c

MAMMOTH WHITE. A very large pure white with heavy foliage. 3 for 20c.

MARGARET FULTON. Clear rich soft salmon rose. Very beautiful 3 for 25c.

MILDRED LOUSE. Beautiful clear strawberry pink, blending to pinard yellow in throat. Each 10c.

MINUET. A beautiful clear lavender. 3 for 20c.

MOROCCO. Large, very deep red, almost black. A good novelty. 3 for 25c.

MOTHER MACHREE. Unusual tall lavender, orange overcast with gray. 3 for 25c.

NEW VIOLET. Soft reddish purple violet. 3 for 25c.

PELEGRINA. The newest of Pfitzer's dark blues and by many considered the best. 3 for 20c.

ROSE MARIE PFITZER. Ruffled white tinted pink. A peach and cream color. Each 15c.

RED GLORY. Large velvety red. A rich lovely color. 3 for 20c.

SENORITA. Clear wide open orange, shading to salmon, lower petals bright orange yellow. Carmine tongue and penciling. 3 for 25c.

WASAGA. Very beautiful soft buff. 3 for 25c.

YVONNE. Blush white with rose blotch. Tall and dainty an excellent variety. 3 for 20c.

MIXED GLADIOLUS. 35c per dozen; 100 for $2.10. Postpaid.

Dahlias

DECORATIVE DAHLIAS

ANDREA ERICKSON, I. D.—Pure white of immense size, and beautiful formation 35c.

ANNIE ROONEY, I. D.—Base of petals crimson with white tips; good stems 35c.

CONGRESSMAN WOLVERTON, I. D.—Bright salmon pink, fine stems 35c.

DAD, I. D.—Large, brilliant red flowers, with good stems 35c.

EAGLE ROCK BEAUTY, I. D.—Pink with cream center. A very good flower and very popular 35c.

EAGLE ROCK FANTASY, I. D.—Beautiful pink of immense size with good stems. A prize winner 50c.

INDIAN SUMMER, F. D.—(Gill)—Soft salmon with gold suffusion and silvery sheen; long stems 50c.

JANE COWL, I. D.—Giant, massive blooms; bronzy buff and old gold, blending deeper to a perfect center 35c.

NATURE'S MASTERPIECE, I. D.—Long, erect stems; blending of old rose, mulberry and bronze 35c.

OMAR KHAYYAM, F. D.—Large blooms of Chinese red, shading to bright orange at tips of petals 35c.

SEAL'S CALIFORNIAN, F. D.—Bright golden yellow at center, shading lighter toward outer petals 35c.

UNCLE TOM, F. D.—Giant flower of dark velvety garnet heavily toned black. Good, erect stems 35c.

VALENTINO, F. D.—Beautiful salmon pink, shading to cream at center. One of the best 50c.

WALDHEIM SUNSHINE, I. D.—Giant blooms with long, wavy petals; strong, erect stems; deep yellow 35c.

CACTUS and HYBRID CACTUS DAHLIAS

ALICE WHITTIER, S. C.—Giant flowers on stiff, erect; heavy primrose sulphur yellow 35c.

AMERICAN TRIUMPH—Large red true cactus 35c.

BEAR CLAWS—Large incurving ruby red cactus with good stems 35c.

EDNA FERBER, S. C.—Coral shading to gold, glisten with golden sheen 50c.

ENCHANTING, S. C. (Gill)—Giant flowers of rich rosy salmon with large golden centers 35c.

LILLIAN SHERIDAN, S. C.—Orange shaded aurora yellow; petals tipped with gold. Erect stems 35c.

ROMANY — Large flowers of bright geranium scarlet long rolled petals 35c.

SATAN S. C.—Large blooms of flaming red with a touch of gold at base 75c.

PEONY FLOWERED DAHLIAS

CITY OF PORTLAND (Gill)—Giant canary yellow on long, erect stems. One of the finest 35c.

MRS. JULIUS MEIER (Gill)—Centers deep yellow with major part of the petals rich deep salmon 35c.

OREGON SUNSET —Gigantic blooms; golden yellow, suffused bronzy crimson; strong stems 35c.

POMPONS

AIMEE—Tiny bronze flowers on long, erect stems. One of the best 25c

ALL BRIGHT (Gill)—Deep gold heavily tipped and toned red, Ideal cut flower 25c.

ATOM — Small, perfect, orange flowers. Good stems 25c.

GOLD DROP (Gill)—Pure gold color; 1¼ inches; long, erect stems. Ideal cut sort 25c.

JOE FETTE — The outstanding pure white pompon. Small, perfect blooms on long, erect stems 25c.

ROSA WILMOTH—A fine rose pink on ideal stems; free flowering 25c.

VIVID—Rich, bright scarlet. A perfect flower well suited for cutting 25c.

COLLARETTE DAHLIAS

GEANTE DE LYON — Large flowers; deep garnet crimson with golden collar. Extra fine 35c.

MT. LASSEN — Fiery red with yellow colar; free flowering; long, erect stems 35c.

BALL OR SHOW TYPE

ANNA REHORST—Deep purple or maroon shade; good stems 35c.

BIG BEN—One of the largest and best show dahlias. Rich raspberry red 35c.

NORMA—Large flowers on good stems; bright orange buff; fine cut flowers 25c.

RED GOLD MEDAL—Brilliant orange scarlet; a sport from Gold Medal. Long, erect stems 35c.

W. W. RAWSON—Large quilled flower; white overlaid with lavender blush; long, erect stems 35c.

Sugar Beet

Sugar beet seed should be planted in early spring in rows 2½ feet apart, cultivate frequently. When plants are about 3 inches high begin thinning and continue at intervals until they are 10 inches apart. The best variety of sugar beets is the Klein Wanzleben. This variety is also used for stock. The White French or Filmore Improved Sugar is most generally grown for stock as it contains a heavy sugar yield. **Packet, 5c; oz,. 10c; ¼ lb. 20c; 50c.**

Brussels Sprouts

Brussels Sprouts are primarily a fall and winter vegetable. The plant will not mature properly in intense heat and dryness.

The plant is closely related to the cabbage and Brussels Sprouts in their early stages treated exactly like a crop of Late Cabbage. Seed sown in the seed bed out of doors in late May should be ready for transplanting to their permanent place in the garden the latter part of July. They should then be somewhat leggy plants 5 to 7 inches high.

Pinch off a few of the leaves and set out the plants about 18 inches apart in rows that are two feet apart. They should have a rich soil but most ordinary garden soil will grow good sprouts if the plants are top-dressed about two weeks after setting out with nitrate of soda at the rate of 1 pound per hundred feet of row.

Cultivate frequently especially after rains. Sprouts begin forming at the leaf bases of the lower leaves first. To stimulate their production it is a good plan to break off most of the lower leaves of the plants beginning about October 1st or when the buds develop. This also forces more food into the forming sprouts, the lowest of which should be picked first.

The best variety for the Northwest is the **Dwarf Improved Brussels Sprouts. Pkt., 5c; oz., 25c.**

Broccoli

In our write-up for Broccoli we are featuring the Italian variety because we believe it to be the best type for Northwest soil and weather conditions. Also, we feel that very few people know of this variety or have actually eaten it. If you come under one of these classifications we strongly urge you to plant some in your garden this spring.

Italian Broccoli is a branching herb about 2 feet high. In summer all of the lateral branches and the circle ones end in a small formed green more or less open head. This, which should be cut before it actually flowers, is cooked like Cauliflower or Spinach and is very delicious and rich in the vitamins.

The plant prefers coolness and moisture rather than heat and dryness. Unless you are in a particularly favorable place, that is along the sea coast, Italian Broccoli is best treated as a two season crop, first it is started in the hotbed or greenhouse in February or March and transplanted in the open after frost. Second crop is sown in the seed bed in June or July and transplanted to the garden a month or six weeks later. The later crop can be harvested through the cool autumn months.

When the seedlings that are grown in flats are ready to put out in the garden, they should be set 2 feet apart in rows which are themselves 2 feet apart. A single row of 50 plants is ample for a family of five. The plants do well in any ordinary garden soil but it should be seasonably moist. They are moderately rich feeders and commercial fertilizer should be applied before plants are put out. The bed should be kept free of weeds and well pulverized.

Packets, 5c; oz., 90c

Saint Valentine Broccoli is probably better known to most gardeners. This is very similar to Cauliflower and should be planted with the same cultural directions. In this type we also offer Early Large White French Broccoli.

Packets, 5c; oz., 90c

Kale or Borecole

This plant is widely grown for greens. Most varieties have heavy, densely curled foliage of tasty greens, and the dwarf variety is desirable for ornamental garden use. The culture is practically the same as that of late cabbage, but as the plants will withstand several degrees of frost, they grow late into the fall. They are more tasty after the first light frost.

Emerald Isle. Grows to medium height and is exceedingly hardy. Best for greens because of their very fine flavor. Produces new shoots as fast as leaves are used. The leaves are closely curled.

Packet, 5c; oz., 15c; ¼ lb., 45c; 1 lb., $1.25

Tall Green Curled Scotch. This variety grows about 2 feet high and has splendid dark green, curled and wrinkled leaves. It is very hardy and vigorous grower. Improved greatly after first slight frost.

Packet, 5c; oz., 15c; ¼ lb., 45c; 1 lb., $1.25

Dwarf Green Curled. Exceptionally fine for ornamental garden use, also good for greens. The leaves are beautifully curled and a brilliant green.

Packet, 5c; oz., 10c; ¼ lb., 45c; 1 lb., $1.00

Cow Kale or Thousand Headed. The most valuable green feed for Pacific Coast dairymen. It is grown the same as stock cabbage.

Packet, 5c; oz., 10c; ¼ lb., 20c; 1 lb., 50c, postpaid.

Imperator Carrot. An outstanding type bred for market garden use and for shipping. Tops medium but strong enough for good bunching. Roots 7½ to 8 inches long with sloping shoulders, smooth, deep rich orange, uniformly tapered to blunt end. Flesh rich orange, color extending to the center of the root with indistinct core, fine grained and of excellent quality.

Packet, 5c; oz., 15c; ¼ lb., 35c

DANISH BALL HEAD CABBAGE

Cabbage

Cabbage will not stand extreme heat or dryness and will grow well only where there is some moisture and coolness. Most good garden soil will produce satisfactory cabbage if it is properly enriched. Commercially it is grown on soil ranging from sandy loam to very heavy clay or even mulch. Perhaps what is more important than texture is soil moisture, this must be adequate and conserved by constant cultivation. Most important of all is fertility, no crop repays so richly the expenditure in fertilizer as cabbage. It is most advisable to use a commercial fertilizer that could be applied before planting, at the rate of 11 pounds to 100 foot row. You will also find that it will pay to top dress about three weeks after the plants are set out with Nitrate of Soda at the rate of 1¼ pounds to 100 foot row. The Nitrate of Soda application is necessary only for the early varieties.

Sow the seed in fine soil in flats during February or March. Do not make the soil too rich as it is likely to make the seedlings grow too fast and become lanky. Make small drills about ½ inch deep and 2 to 3 inches apart and put 6 to 8 seeds in each drill. Water often and keep an even temperature of 50 to 60 degrees.

When seedlings are 3 to 4 inches high replant further apart in flats or boxes. This insures stocky instead of spindling plants, and makes them a month or six weeks earlier than if the plants were set out. Cabbage is set at different intervals, depending upon variety—early varieties should be set about 14 inches apart in rows 28 inches apart. Late season varieties should be set 24 inches apart in rows 36 inches apart. If planted much closer they would be crowding and result in small heads.

Early types can be set out as soon as there is no danger of hard frosts. Late types, should, over most of the northern states, be placed by August 1st. It takes from 45 to 50 plants for a row 100 feet long.

Cabbages are divided into three groups—Early, Midseason and Late or Winter varieties.

EARLY VARIETIES

Early Jersey Wakefield. Small compact conical heads, plants small short stem.

Packet, 5c; oz., 25c

Copenhagen Market. Heads small, round, solid. Plants compact with short stems.

Packet, 5c; oz., 25c

Golden Acre. Earlier than Copenhagen Market. Heads are small, round and solid.

Packet, 5c; oz., 25c

Charles Wakefield. Producing larger heads than Early Jersey Wakefield but is a week later in maturing. Heavy yielder of fine quality. **Packet, 5c; oz., 25c.**

MIDSEASON VARIETIES

Stein's Dwarf Flat Dutch. Heads globular, solid. Plants are dwarf with short stems.

Packet, 5c; oz., 25c

Glory of Enkhuizen. Heads large, round, solid with few outer leaves. Excellent kraut cabbage.

Packet, 5c; oz., 25c

LATE OR WINTER VARIETIES

Packet, 5c; oz., 25c

Danish Ball Head. Most widely used type of late cabbage. Heads deep, round with hard, compact interior. Stubby with short stems.

Late Flat Dutch. Large, flat, solid heads. 6½ to 7 inches deep.

Other Varieties. Danish Round Head, Penn State Ball Head, Red Rock (red cabbage), Late Savoy, Wong Bock and Chinese Petsai—both Chinese cabbage.

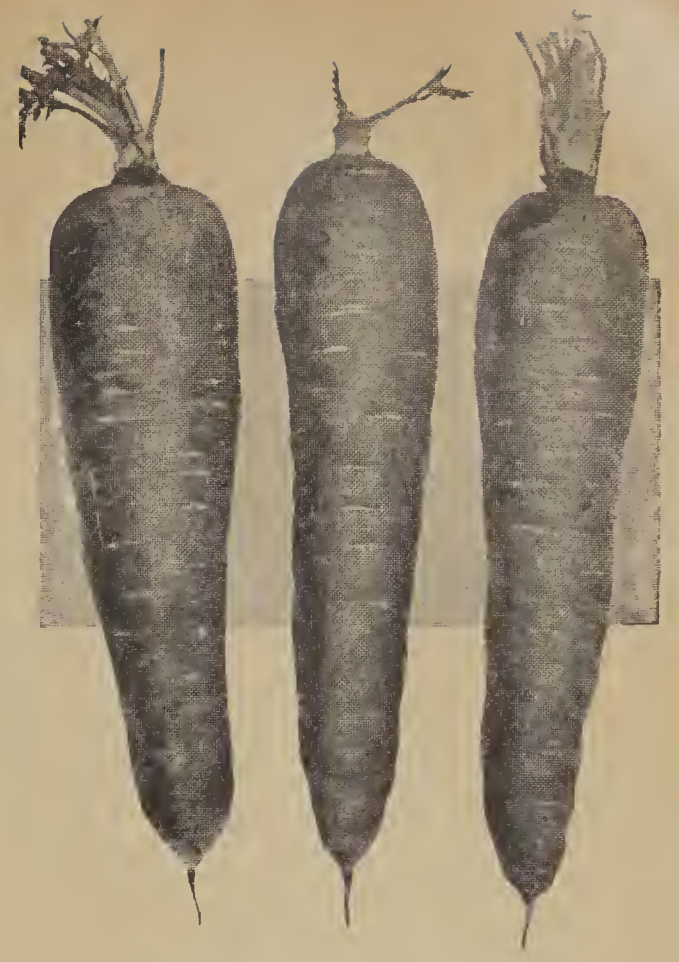
Straight Eight Cucumber. As its name indicates, it grows very straight, a long, slender fruit with a slight taper at each end. The most desirable slicing cucumber you can plant. At the edible stage the length averages about eight inches and the color is an intense dark green. The fruits are smooth and medium early. **Packet, 10c; oz., 25c; ¼ lb., 75c.**

Carrots

Carrot culture is very simple, the ordinary procedure is to sow the seed rather thickly in drills about ½ to ¾ of an inch deep the rows being 12 to 24 inches apart, depending on hand or machine cultivation. After the plants are up about 5 inches they should be thinned from three to four inches apart in the row. If the soil is rich there will be no trouble about root development. Young, tender, quick growing carrots are better flavored than old or slow growing ones which are fit only for stock feed. If the soil is not rich apply a good complete commercial fertilizer at the rate of 6 pounds per one hundred feet of row. It takes about 1 ounce of seed for a row of this length.

In order to have tender juicy carrots all season long it is advisable to make small sowings at regular two-week intervals up to the middle of July. Later sowings may not mature before the early frosts.

Carrots, like all root crops should be protected against soil insects such as maggots, worms and wire worms. This is best controlled by the use of Crude Naphthalene flakes. Sprinkls these flakes in the rows at the time of planting seed.



DANVERS HALF LONG CARROTS

P. S. Co.'s New Coreless. Larger than all other varieties. Crisp, solid, and uniform in size. Truly the outstanding carrot for tasty, crisp vegetable salads during the hot summer months. A genuine stump-rooted type. Holds its color and cooks very quickly. **Packets, 5c; oz., 15c; ¼ lb. 35c.**

Danvers Half Long. Grown mainly for its productiveness and adaptability to all classes of soil. A fine quality carrot of uniform size and shape. Sweet, crisp, tasty and tender deep orange flesh. Exceptionally fine for "vegetable stew".

Packets, 5c; oz., 15c; ¼ lb., 35c

Chantenay *(Half Long)*. Well adapted for home gardens. Requires little cultivation and care. Ideal for lazy gardeners. Medium size tops, small necks, slightly tapering roots, stump-rooted and smooth. Deep orange flesh. **Pkts., 5c; oz., 15c; ¼ lb., 35c**

Other Varieties. Improved Long Orange, Oxheart, Early Scarlet Horn, Red Cored Chantenay, Early Scarlet Horn, French Forcing, Imperator.

Packets, 5c; oz., 15c; ¼ lb., 35c

STOCK CARROTS

Portland Seed Co.'s Yellow Giant. Especially adapted to wet, heavy soils. Half long roots, broad shoulder, growing half out of the ground. Bright yellow flesh. Producing a heavy crop that is most excellent for dairy cows.

Packet, 5c; oz., 15c; ¼ lb., 35c

Large White Belgian. One of the oldest and best known stock carrots. Roots 12 inches in length, producing a heavy yield of marvelous quality carrots. **Packet, 5c; oz., 15c; ¼ lb., 35c.**

Mastodon. Improved short white flesh, with smooth roots. Very heavy at shoulders, tapering. A heavy producing field carrot.

Packet, 5c; oz., 15c; ¼ lb., 35c

Celery

Successful celery culture is based on the right climate and the right soil. As to the first the plant requires coolness as well as sufficient moisture.

No garden crop grown is such a rich feeder as celery. The soil must have depth and mellowness and an abundant supply of moisture. It is impossible to grow celery in hard or sun-baked soil. It is advisable to prepare the seed bed with a good commercial fertilizer and peat moss using about 6 pounds per 100 foot row. This should all be done about three weeks before the plants are set in the garden.

In growing celery from seed it is advisable to start the seed in flats and later transplant when the small plants are approximately 5 inches tall.

Golden Self Blanching. Indeed, one of the best early spring varieties for Northwest gardens. The long, crisp stalks mature to a beautiful golden yellow, which are easily blanched to a creamy white.

Packet, 5c; oz., 50c

Golden Plume. Superior quality, vigorous growing. A favorite with home gardeners. Semi-dwarf in habit. Fine flavored stalks that are brittle, stringless and blanch quickly. **Packets, 5c; oz. 50c**

Winter Queen. Matures in the winter and spring. Very compact growth, with large heart. Stalks blanch to cream white. Ribs are solid, crisp and free from strings. **Packets, 5c; oz., 25c.**

White Plume. The very earliest known variety. Stalks are exceptionally crisp and tender with inner leaves and tasty white heart. **Packets, 5c; oz., 25c**

CELERIAC

The same culture as celery

Large Smooth Prague. The latest improved form with very few side roots. This is the largest and best variety of the "Turnip Rooted Celery." **Packet, 5c; oz., 25c; ¼ lb., 75c. Postpaid.**

MT. HOOD SNOW BALL CAULIFLOWER

Cauliflower

Cauliflower is more difficult to grow than any other plant in the cabbage tribe, like most of them it will not stand heat and drought which limits its culture to areas free of these conditions. It is best grown in fairly cool climates where there is plenty of moisture. It will not, however, stand as much frost as cabbage or Brussels Sprouts and in very protracted warm weather it will not head. Like other members of the Cabbage family Cauliflower is divided into two groups, early varieties and the late varieties.

Soil and fertilizer conditions are the same as cabbage. It is advisable to use a good commercial fertilizer and to cultivate at regular intervals.

For quicker and better results it is advisable to start cauliflower in flats and later transplant when the young plants are about four or five inches tall. The plants should be set about two feet apart in rows three feet apart. This will allow approximately 50 head of Cauliflower to a 100 foot row. This should be more than ample for a family of five.

Solid white heads may be produced by tying the outer leaves over the center of the plant as soon as the first button-like swelling appears. Use string, tape or raffia for tying. Do not pull tight enough to injure outer leaves.

Portland Seed Co.'s Mt. Hood Snowball. One of the best early varieties that we highly recommend for early and late planting. Its pure white, fine quality heads of medium uniform size are exceedingly tasty. Popular with home gardeners as well as market gardeners. **Packet, 5c; oz., $2.00.**

Danish Giant. Outstanding because of its ability to yield heavily in dry weather. Its large, solid white heads mature very early if forced indoors during early growth. **Packet, 5c; oz., $1.50.**

Early Snowball. Adapted very well to forcing as well as outdoor planting. Plants are compact, producing medium to large, round heads that are pure white when blanched. **Packet, 5c; oz., $1.75**

Other Varieties. Large Algiers, Autumn Giant. **Packet, 5c; oz., $1.25**

Chicory

Witloof. This variety has become exceeding popular for winter salads. It forms a delicious dish when served like Endive or Cos lettuce with French dressing. The leaves and stems blanch easily. Seed should be sown one inch deep during May or June and spaced about 18 inches apart.

Packets, 5c; oz., 15c

Large Rooted. The roots of this plant are very popular as a coffee substitute. The young tender leaves may be used for salad or cooked for greens. Sow quite thinly in shallow drills in the spring. When well started, thin to stand 2 to 3 inches apart in the row. **Packet, 5c; oz., 15c, postpaid.**

Chives

The famous Schnittlauch—highly prized for flavor. The seed of this is not easily germinated and it will be necessary, therefore, to plant a fairly good quantity of the seed if many plants are desired.

Packet, 5c; oz., $1.00, postpaid

Swiss Chard

Only the tops of this beet are used, like spinach, and the succulent stalks and midribs may be prepared in the same way as asparagus. The plants are cultivated like beets except that they should be thinned to 8 to 10 inches apart. If only the outer leaves are gathered, the inner leaves will continue to grow, and repeated pickings can be made.

Lucullus, Dark Green. The fleshy crumpled leaves of this variety make very choice greens. Plant grows erect, the stalks are rounded and finely ribbed; the foliage is a rich deep green. Favored by many because of its superior flavor.

Packet, 5c; oz., 15c; ¼ lb. 35c; lb., $1.00

Utah or Green Crisp Celery. Matures a week or ten days earlier than most other types of celery. Plants are sturdy, compact, and solid. Stems are broad, thick and rounded.

Packets, 5c; ounce, $1.00

Corn

Corn is truly a native of this country, developed before the new world was discovered. It can be raised with some success in every state in the union, however, for best results it requires a growing season of seventy to eighty days and with plenty of summer heat.

Any good garden soil will grow corn but it will mature quicker and be more tender if a good commercial fertilizer is used at the rate of about 11 pounds to a 100 foot row.

Generally speaking, it is better to plant the early varieties in drills and the later varieties, of course, in hills, so spaced that cultivation may be done both ways without disturbing the plants. If your garden is of the weedy sort it is better to plant all varieties in hills because it is thus possible to control weeds easier when plants are in long rows.

For the early types make the drills 2 to 2½ feet apart and 1½ inches deep. For growing in rows put a seed every 3 inches in a drill with the expectation of thinning to 6-inch intervals as soon as possible. The thinned plants cannot be transplanted with any success. **Packet, 10c; ½ lb., 20c; 1 lb., 30c, postpaid.**

YELLOW VARIETY

Golden Bantam. This variety of corn is second to none for tender, sweet and juicy ears. Although not as early as some types, its exceptionally fine quality makes it well worth waiting for. Stalks about 5 feet tall. Eight straight rows of kernels to the cob.

Improved Golden Bantam. An improved strain over the old type Golden Bantam, however, we still recommend the old fashioned variety for Northwest conditions. This newer strain has ten rows of kernels to the cob.

Golden West. A very fine early variety. Much the same flavor and tenderness as Golden Bantam and exceedingly popular with market gardeners. Ten to twelve rows to the cob.

Early Sunshine. One of the early varieties of sweet corn. Matures 3 or 4 days earlier than the majority of others. Taller and more vigorous with 12 rows to the ear.

Other Varieties. Golden Giant, Golden Evergreen.

WHITE VARIETY

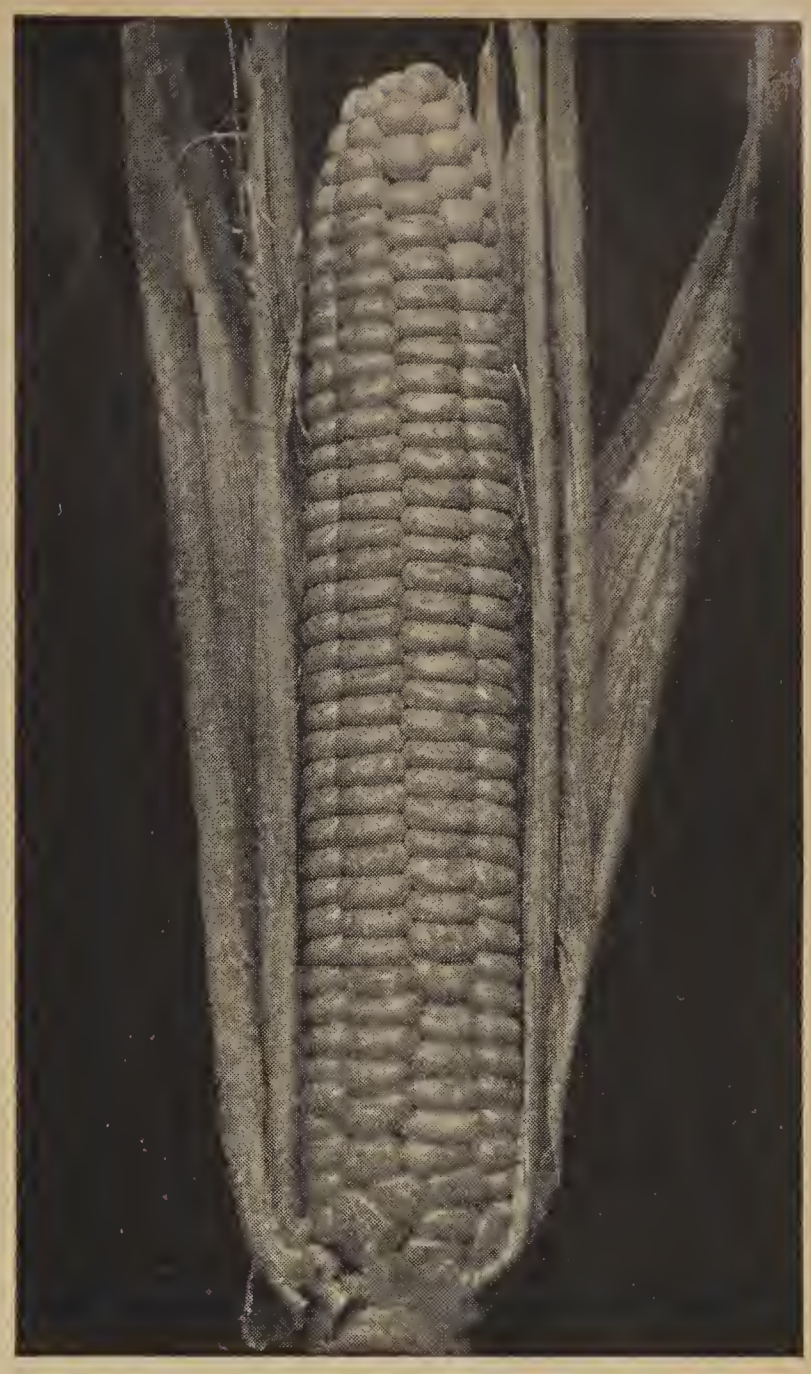
Stowell's Evergreen. Remarkable for remaining in a fresh condition for a long period. Plants 7 to 7½ feet tall. Ears 8 inches long, 2¼ to 2½ inches thick; 14 to 20 rows to the cob. The most popular white variety of sweet corn.

Oregon Evergreen. Earlier than Stowell's and just as fine and sweet. An exceptionally fine canning variety because of its uniform medium to large ears with 12 to 18 rows.

Other Varieties. Early Portland Market, Country Gentleman, Black Mexican, Early Evergreen, Early Minnesota, Howling Mob, Peep o' Day and White Cory.

FIELD CORN

We offer the following varieties: Minnesota "13", Oregon Yellow Dent, Pride of the North, Northwestern Dent, Champion White Pearl, White Flint, Wisconsin White Dent and King Philips. We will gladly quote prices on inquiry. **1 lb., 15c; 10 lbs., $1.00**



GOLDEN BANTAM CORN

POP CORN

Butter Crisp. The kernels of this variety pop out large and fluffy and resembles buttered pop corn because of its creamy color.

Packet, 10c; one pound, 30c

White Rice. The standard variety for many years. Kernels pop out large and snowy white. Exceedingly well flavored.

Packet, 10c; one pound, 30c

Corn Salad

Fetticus or Lamb's Lettuce. Used a great deal in winter and spring as a substitute for lettuce, or sometimes cooked like spinach. Sow in drills 1 foot apart in the spring or fall of the year.

Packet, 5c; oz., 15c; ¼ lb., 40c. Postpaid

Golden Cross Bantam. This hybrid is undoubtedly one of the best and most prolific of the yellow sweet corns. The ears are 8 to 10 inches long with 14 to 16 rows of kernels, slightly lighter in color and yielding about 40% more marketable ears than Golden Bantam. Grows 5 to 6 feet high with sturdy stalks and deep green foliage.

Packet, 10c; ½ lb., 25c; 1 lb., 40c

Cucumbers

All Cucumbers—Pkt., 5c; oz., 15c, postpaid

Gardeners with limited space cannot afford to plant cucumbers, which for outdoor culture must be planted in hills at intervals of at least 4½ feet each way. The plant is a sprawling tendril-bearing vine. It requires considerable heat, a lot of moisture and a rich soil. Cucumbers are much more sensitive to frost than most vegetable crops. They can only be grown in regions that not only have plenty of heat but a frost-free period of 75 to 90 days.

Warm sandy loam especially if it has a gentle slope southward is the best soil for out-door cucumbers. No other method of fertilizing is so satisfactory as putting 2 quarts of thoroughly rotted manure under each hill or a scant wheelbarrow load is better. Broadcasting manure or fertilizer for plants spaced so far apart is merely wasteful.

See that the manure is covered sufficiently so that no seed touches it. This is easily accomplished by forming a circular hill about a foot wide and 4 inches deep over each lot of buried manure, the site of which had better be marked with a stick, if some days intervene between burying and planting time.

Planting cannot be done until warm or hot weather is assured. Plant six seeds to each hill expecting to reduce them to three as soon as germination is complete, selecting the three best plants. The seed should be planted about 1½ inches deep.

As the vines become large they will fill all of the space between the hills, so it is very important that you cultivate thoroughly while the plants are still young.

Diamond Long Green. Truly the outstanding of the large varieties. It is extremely crisp and tender, sweet, very fine for slicing. It is best for sweet pickles when matured. **Packet, 5c.**

Improved White Spine. An outstanding variety for table use. It is one of the early types and exceedingly tasty. Uniformly straight and handsome light green fruits, with a few white spines.

Packet, 5c

Boston Pickling or Green Prolific. Truly the finest and most popular pickling variety. The tasty, bright green fruits range from 4 to 5 inches in length and are exceedingly productive. Fine for home and market. **Packets, 5c.**

Davis Perfect. A vigorous grower. Fruits long, dark green, crisp and tender. Holds its color exceedingly well after picking, which makes it a favorite with the market gardeners. Seed cavity is small, making them very desirable for home and market uses. One of the outstanding varieties for Northwest climate.

Colorado. Cucumber Colorado won the All American 1935 Award of Merit and is destined to become one of the most popular varieties. One of its outstanding qualities is that it does not taper but is practically the same size from end to end. The fruits are dark green, 9 to 12 inches long and will yield more slicing cucumber than any other variety of approximately its size. Is highly recommended for the shipper and market garden.

Other Varieties. Short Green or Early Frame, Lemon, Japanese Climbing, Small Gherikn, Deltus, Vaughn.

Cress

True Water Cress. A very distinct variety of cress with tasty, small, oval leaves. Grown easily in shallow ponds or along the edges of small streams. Excellent for all kinds of salad.

Packet, 5c; oz., 45c; ¼ lb., $1.50. Postpaid

Curled or Pepper Grass. Its leaves have a very pleasant pungency, which gives it the common name "Pepper Grass." The spicy foliage is frilled or curled making it very attractive for salad trimmings. Sow thickly in drills.

Packet, 5c; oz., 15c; ¼ lb., 45c. Postpaid

Endive

Culture similar to lettuce. Outer leaves should be tied over the head to bleach.

Packet, 5c; oz., 10c; ¼ lb. 35c. Postpaid

Egg Plant

Black Beauty. Extra early, quick growing, vigorous variety, uniform size. Color deep, blackish purple. Excellent for market.

Packet, 5c; oz., 60c; ¼ lb., $1.75. Postpaid

New York Improved Large Purple. Leading market variety. Not quite as early as Black Beauty. Large and productive.

Packet, 5c; oz., 60c; ¼ lb., $1.75. Postpaid

Fennel

Florence Fennel. An Italian vegetable with thick leaf stem. Served boiled or sliced, also cooked in soups. Easily grown.

Packet, 5c; oz., 25c. Postpaid

Leek

American Flag. Used very extensively throughout the entire country. A very strong hardy grower that is very easily cultivated in the home garden. It is broad leaved, with rather short but very thick stems.

Packet, 5c; oz., 25c; ¼ lb., 75c. Postpaid

Large Rouen. A very hardy variety, with short, thick, well-blanched stems and dark green leaves.

Packet, 5c; oz., 25c; ¼ lb., 75c. Postpaid

Herb Seed for Planting

ANISE. Used as a cordial and for garnishing and flavoring. Seeds have an agreeable aromatic taste. **Pkt. 10c; oz. 35c**

BALM. Leaves are fragrant and are used as a tea for fevers. **Pkt. 10c; oz. 50c postpaid.**

BASIL (Sweet). The leaves are used for flavoring soups, stews and highly seasoned dishes. **Pkt. 10c; oz. 50c.**

FENNEL (Sweet). The boiled leaves are used in sauces. **Pkt. 10c; oz. 30c.**

HOREHOUND. Leaves used for seasoning. **Pkt. 10c; oz. 75c.**

HYSSOP. Used as a stimulant and a mild tonic. **Pkt. 10c; oz. 75c.**

BORAGE. The leaves are used for flavoring and the flowers furnish bee pasture. **Pkt. 10c; oz. 50c.**

CARAWAY. Grown for the seeds, which are used extensively for flavoring of bread, pastry, etc. **Pkt. 10c; oz. 25c**

CATNIP or CATMINT. The leaves are used for seasoning. It also makes an excellent bee pasture. **Pkt. 10c; oz. $1.00.**

CORIANDER. The seeds are used in the manufacture of liquors and confectionery. **Pkt. 10c; oz. 25c.**

DILL SEED. For planting. **Pkt. 10c; oz. 20c; ¼ lb. 50c postpaid.**

MARJORAM (Sweet). The leaves and the ends of the shoots are esteemed for seasoning in summer and are also dried for winter use. **Pkt. 10c; oz. 75c.**

ROSEMARY. The aromatic leaves are used for seasoning. **Pkt. 10c; oz. $1.00.**

RUE. For medicinal purposes. **Pkt. 10c; oz. 50c.**

SAGE. The most extensively used of all herbs as a seasoning for dressing. **Pkt. 10c; oz. 75c.**

SUMMER SAVORY. A hardy annual. The dried stems, leaves and flowers are extensively used for flavoring, particularly in dressings and soups. **Pkt. 10c; oz. 75c.**

THYME. Used for seasoning. **Pkt. 10c; oz. $1.00.**

WORMWOOD. Used medicinally and is beneficial for poultry. **Pkt. 10c; oz. 50c.**

TRUE LAVENDER. Used chiefly in the manufacture of perfumery. **Pkt. 10c; oz. 75c.**

Herb Seed for Flavor

ANISE. For flavoring. **¼ lb. 15c; lb. 30c postpaid.**

CARAWAY. For flavoring. **Oz. 10c; ¼ lb. 20c postpaid.**

CELERY. For flavoring. **Oz. 10c; ¼ lb. 20c postpaid.**

MUSTARD.. For flavoring. **Lb. 20c postpaid.**

PARSLEY. For flavoring. **¼ lb. 10c; 1 lb. 35c postpaid.**

POPPY. For flavoring. **¼ lb. 10c; 1 lb. 35c postpaid.**

Lettuce

Crisp, tender lettuce, the most desirable of all salad plants. Can best be grown with the strictest attention to its moisture, soil and climatic requirements. There are many varieties and types of lettuce, however for the home gardener we can segregate them into two varieties, namely, head variety and looseleaf variety. The first is by far the most desirable but the most difficult to grow. The second is less desirable but so much easier to grow that most beginners will do well to select one of its varieties.

Lettuce can easily endure several degrees of frost especially in the seedling stage which greatly facilitates the handling in the early spring. However this popular vegetable cannot be grown in extreme heat.

SIMPSON'S EARLY CURLED LETTUCE

Any good garden soil will grow lettuce of a sort but the most favorable soils are rich sandy loam. Some varieties like Grand Rapids do best on good heavy soils with considerable clay in them. Lettuce soils should not be acid, if they are in this condition they should be limed. However, more important than the texture of the soil is the problem of moisture. If this is not available do not attempt to grow this vegetable.

HEADING VARIETIES

Packet, 5c; oz,. 15c

Portland Seed Co.'s Crispette. Heads are large, firm, crisp and tender. Bright green, curly leaves cover the outside. Solidity of the heads is insured by the large, white main ribs of leaves which curve toward the center. Withstands hot weather far better than most varieties and exceedingly tasty. **Packets, 5c**

New York or Wonderful. The best head lettuce for market gardeners. It's large, very solid, tender, crisp and sweet. Beautifully blanched to a creamy white with bright green outer leaves. A very hardy and rapid grower, also, deep rooted. **Packet, 5c.**

Hanson *(Improved Hard Heading Stock).* One of the very best. The heads are green on the outside and cream colored on the inside. It withstands the hot sun very well, and stays crisp for quite some time. **Packet, 5c.**

Other Varieties. Brown Dutch, New York 12, Big Boston.

LOOSE-LEAF VARIETIES

Grand Rapids. This variety is the standard hothouse lettuce for forcing. It also does exceedingly well in the open ground. The leaves are light yellowish green, slightly crimped, crisp and tender. **Packet, 5c**

Simpson's Early Curled. Very fine for early planting and forcing. The leaves are finely curled and wrinkled. It is very tasty and crisp and does not wilt readily. **Packet, 5c.**

Black Seeded Simpson. The leaves form a close, compact mass. Yellowish green color and exceedingly curly. Very early cultivated. **Packets, 5c**

Other Varieties. Chicken Lettuce, Prizehead.

GARDEN INSECT AND DISEASE CONTROL

VEGETABLE	INFESTED BY	PARTS OF PLANT AFFECTED	WHEN TO SPRAY OR DUST
ASPARAGUS	Beetle	Denudes stem	Early spring
	Rust	Foliage and stem	Early spring
BEANS	Bean Beetle	Leaves and pods	Spring, soon as observed
	Anthracnose	Pods, leaves and stem	
BEETS	Leaf Spot	Leaves	
	Beet Leaf Hopper	Foliage	May
CABBAGE	Cabbage Worm	Outer Leaves	May and during summer
	Maggot	Young plants	April and May
	Black Rot	Stem and leaves	April and May
CARROT	Web Worm	Foliage	June
	Soft Rot	Root	
CAULIFLOWER	Worm	Outer leaves	
	Maggot	Young plants	
	Black Rot	Stem and leaves	
CELERY	Blight	Leaves and stalk	
	Leaf Tier	Foliage	July 15 to Aug. 1
CORN, SWEET	Seed Rot—Blight	Ear and leaves	When ears appear
	Ear Worm	Ear	When silk appears
	Stalk Borer	Stalk	Early spring
	Chinch Bug	Leaves and stalk	July 1
CUCUMBER	Beetle	Young foliage	When plants appear
	Anthracnose	Leaves	When plants show leaves
	Aphids	Leaves	When plants show leaves
LETTUCE	Aphids	Leaves	May 1
	Mildew	Leaves	May 1
	Gray Mould	Leaves	May 1
MUSKMELON	Same as Cucumber		
ONION	Thrips	Foliage	April, again in mid-summer
	Maggot	Crown and bulbs, causing rot	April
PARSNIP	Same as Carrot		
PEAS	Root Rot	Turns plant yellow	
	Blight	Leaf, stem and pod	
	Aphids	Stunts growth	When observed
POTATOES	Scab	On tuber only	
	Blight	Leaves	When plants appear
	Potato Beetle	Foliage	July, August
RADISH	Cabbage Worm	Leaves	When plants appear
	Harlequin Bug	Leaves	When plants appear
	Maggot	Radish	When plants appear
	Aphids	Leaves and stem	When plants appear
SPINACH	Flea Beetle	Leaves	When plants appear
	Aphids	Leaves and stem	When plants appear
	Leaf Miner	Leaves	When plants appear
SQUASH	Striped Cucumber Beetle	Stem, blossom and fruit	When plants appear
	Squash Bug	Leaves	When plants appear
	Squash Vine Borer	Stem	When plants appear
TOMATO	Fruit Worm	Leaves and stem	When plants appear
	Flea Beetle	Leaves and stem	When plants appear
	Horn Worm	Leaves and stem	When plants appear
	Leaf Spot	Leaves	When plants appear
TURNIP	Same as Cabbage		
WATERMELON	Wire Worm	Seeds	
	Pale Striped Flea Beetle	Stalks	

Melons

The term melon, as commonly used, includes the fruits of two distinct types, namely the Muskmelon or Cantaloupe and the Watermelon. Both of these types require hot weather during the day and warm evenings in order to fully ripen the fruit. We do not recommend growing melons in the Western section of the Northwest, however, there are certain types that do fairly well in this section.

Melons thrive on a well-drained fertile soil; for early crops a light, sandy loam is preferred. Excessive alkali should be avoided. Manures or fertilizers are not generally used in the principal producing regions, the fertility being maintained by rotation and the use of green manure crops. However, where this is not available, it is advisable to use a good commercial fertilizer in a mild manner.

In growing melons it is necessary to allow a great deal of room for spreading vines. The seed may be planted as soon as the ground is warm and weather conditions permit. The hills should be approximately 6 feet apart.

WATERMELONS

All Watermelons—Pkt., 5c; oz., 15c, postpaid

Klondike. Rind is a beautiful dark green and exceptionally thin. The interior of the melon is a distinctive flesh color. Grow uniform in shape and size and ship very well.

Sweetheart. The vines are vigorous and productive. Fruits are large, oval, heavy mottled, dark and bright green, rind thin, flesh bright red, firm, sweet and tender.

Kleckley's Sweet or Monte Cristo. Distinctly a home garden melon as the dark bluish-green rind is so crisp that it breaks easily. The long, oval fruits are slightly larger near the blossom end. They weigh from 25 to 30 pounds and ripen in a little over one hundred days. For home gardeners we highly recommend this variety.

Black-Seeded Ice Cream. The melon is almost round, with a thin rind of medium green. The inside flesh is pink and exceptionally sweet and fine flavored. This variety matures early and is a fine keeper.

Other Varieties. Rattlesnake, Stone Mountain, Tom Watson, Irish Grey, Cole's Early, Black-Seeded Chilean.

MUSKMELONS

All Muskmelons—Pkt., 5c; oz., 15c, postpaid

Sugar Rock. The fruits are oval, large size, without ribbing and netted in the manner characteristic of these melons and from which they take their names. Matures in about 85 days from sowing seed, in ordinary weather conditions. The flesh is deep and thick, a beautiful orange color, with a sugary delicious flavor that is unexcelled.

SUGAR ROCK MUSKMELON

Hearts of Gold. The rind is firm and densely netted. Rich, fine-grained, orange colored flesh is excellent in flavor. The seed cavity is small and in all the melon is a very fine shipper.

Rocky Ford Pollock 10-25. The fruits are uniform and heavily netted. The flesh is very sweet and tasty with a salmon-orange tint.

Other Varieties. Burrel Gem, Large Yellow Cantaloupe, Small Green Nutmeg, Osage or Miller's Cream, Early Hackensack, Hale's Best, Honey Dew Pink Flesh, Honey Dew Green Flesh, Perfecto, Speer, Banana, Persian.

CASABA MELONS

Golden Beauty. A beautiful bright golden yellow, wrinkled skin. The fruits are globular shaped and mature very early. The flesh is white and very thick. Exceedingly tender, rich, juicy and "honey sweet." **Packet, 5c; oz., 15c, postpaid.**

Onions

There are two types of onions that are most commonly grown by home gardeners—the young green or bunching onions and the mature bulb or dry onion. Green, or bunching onions, may be produced from seed, sets or multiplier bulbs. The set method is generally used among most home gardeners for the earliest green onions. However, the seed method produces a much better quality of onion and is the common method among the market gardener trade.

Dry onions may be produced from sets, but they are usually rather poor quality and very poor keepers. We therefore recommend, wherever it is possible, growing onions from seed.

Onions require a rich, well drained soil, but any good garden soil will be satisfactory so long as it is not too stony. To be sure that the soil is rich enough, use a pound of well rotted manure to each square foot, and in addition use four or five pounds of commercial fertilizer to each 100 square feet.

RIVERSIDE SWEET SPANISH

ONIONS—Continued

The soil must be moist, as the plants will not thrive in dry sites. Onions are grown successfully in nearly all but the desert states, but they thrive best in the comparatively cool sites.

Oregon Yellow Danvers. Bulbs large, half globe, small neck, with thin brownish skin. Flesh firm, white and fine grained. Ripens early and a good keeper. **Packet, 5c; oz., 25c, postpaid.**

White Bunching. Outstanding for green onions. The young sprouts are crisp and mild, attaining a good size before the bulb forms. **Pkt., 5c; oz., 25c**

Riverside Sweet Spanish. A large globe shaped brown onion, weighing one to three pounds. Flesh mild and sweet. **Packet, 5c; oz., 25c.**

Crystal Wax Bermuda. Medium size, pure waxy white. One of the mildest sorts grown. **Packet, 5c; oz., 25c**

Other Varieties. Australian Brown, Prizetaker, Yellow Globe Danvers, Large Red Weathersfield, White Portugal, Yellow Bermuda, and Bottom Onion sets.

Okra or Gumbo

Grown for its green pods, which are used in soups, stews, etc., for their rich flavor and substance.

Improved Dwarf Green. Very early, with long green, slender pods.

Packet, 5c; oz., 15c; ¼ lb., 35c. Postpaid

White Velvet. Large pods, smooth or very slightly ribbed. Remains tender a long time.

Packet, 5c; oz., 15c; ¼ lb., 35c. Postpaid

Parsley

Packet, 5c; oz., 10c, postpaid.

Plain. Plain leaves, flat, dark green. Used for flavoring and drying.

Turnip Rooted or Hamburg. Roots used for flavoring soups, stews, etc.

Extra Double Curled. Dark green, moss-like leaves, finely curled.

Parsnips

CULTURE

Culture same as for carrots. May planting considered best.

Hollow Crown or Long White. Long, white, smooth, tender, sugary, excellent flavor. Very hardy. Will keep through the winter without protection. **Packet, 5c; oz., 15c, postpaid.**

Peppers

Continuous warm weather for best results. Seed should be started in hot beds as it is slow in germinating. Set plants in ground when about 2½ inches tall. A moderate dressing of guano, or commercial fertilizer, hoed into the soil after plants are well established, will give better results.

All varieties of Peppers: Packet, 5c; 1 oz., 60c, postpaid.

OTHER VARIETIES

Perfection Pimento.
Large Bell or Bull Nose.
Cayenne.
Chinese Giant.
Ruby King.
Chili.
California Wonder.

Pumpkins

Pumpkins are grown much the same as melons, but are less sensitive to cold weather. They are best after the first light frosts, usually during the months of October and November. Seed should be planted during the early part of May, in hills 6 to 8 feet apart in all directions. Every garden should have a few hills of this truly American vegetable.

All varieties of pumpkins: Packet, 5c; 1 oz., 10c, postpaid.

Large Yellow or Connecticut Field. Large, round. Deep, glossy yellow. Very productive. Good keeper. Grown extensively for stock feeding.

Giant of All ("King of Mammoths"). Almost a globe in shape. Skin a rich golden yellow, flesh firm, fine grained and deep yellow, sweet flavored, very thick. Excellent quality.

Winter Luxury. The best flavored pie pumpkin grown. Excellent keeper. Medium size. Color golden russet, finely netted. Flesh deep golden, sweet, tender and very thick.

Sweet or Sugar. A productive small pumpkin. Skin orange, flesh deep yellow, fine grained. Very sweet. The famous "New England Pie Pumpkin."

Rutabaga or Swede

Improved American Purple Top. The leading variety. Large, immense yielder. Superior in every way.

Packet, 5c; oz., 15c; ¼ lb., 25c; 1 lb., 75c. Postpaid.

Salsify or Vegetable Oyster

Mammoth Sandwich Island. Roots large, smooth, very hardy. May remain in ground during winter or be stored in dry earth or sand.

Packet, 5c; oz., 20c; ¼ lb., 55c; 1 lb., $2.00. Postpaid.

Peas

The garden pea combines two features of great value. It is not only very nutritious and rich in Vitamins A, B and C but provides many advantages of clean vegetable, hence, its first great importance as a garden crop. For best results this crop is grown in a cool mild climate.

Peas do well on practically all types of garden soil. Best results may be obtained by using a good commercial fertilizer at the rate of 4 pounds per 100 foot row. Also for a better crop it is advisable to inoculate with Nitragin.

Almost no garden crop is so easy to start as peas. Peas of the low sort should be planted just as early as the ground can be worked. You need not wait for the last erratic late frost. Sowing pea seeds should be practically the first spring activity in the vegetable garden. Tall varieties are better planted about ten or fifteen days later than the lower sorts.

For the first planting of the low varieties make the drills about two inches deep, or 1 inch deep if the soil is heavy and has much clay in it. Later planting should be in drills about twice this depth but only half filled at first. As the plants grow the trench is gradually filled up. The object of this deeper drill for the later planting is to secure greater coolness and moisture for the roots and plants that will have to face greater heat.

Peas need only sufficient cultivation to keep down weeds.

EARLY VARIETIES

All Peas—Packet, 10c; ½ lb., 20c; 1 lb. 30c, postpaid.

Alaska. Height of vine 30 inches. Pods 3 inches long, blunt, straight, light green, containing 6 to 8 peas, good quality—used extensively for canning.

Gradus. Height of vine 36 inches. Pods 4 inches long, broad, plump, pointed, medium green, containing 8 to 10 sweet delicious peas.

Laxtonian. Height of vine 18 to 20 inches. Pods 4½ inches long, broad, slightly curved, pointed, deep green containing 7 to 8 large succulent peas.

American Wonder. Height of vine 14 to 16 inches. Pods 2½ to 3 inches long, blunt, straight, light green containing 6 to 7 peas.

Dwarf Gradus. Height of vine 28 inches. Pods 3½ to 4 inches long, broad, plump, pointed, medium green containing 7 to 8 large tender peas.

Little Marvel. Height of vine 18 inches. Pods 3 inches long, blunt, plump, dark green containing 7 to 8 tender peas.

Premium Gem. Height of vine 20 to 22 inches. Pods 2¾ to 3 inches long, round, straight, blunt, light green containing 6 to 7 peas of good quality.

World's Record. Height of vine 30 inches. Pods 3½ to 4 inches long, broad, plump, pointed, containing 7 to 8 large tender peas.

Thomas Laxton. Height of vine 30 to 36 inches. Pods 3½ to 3¾ inches long, plump, broad, blunt, medium green containing 7 to 8 large tender peas.

Laxton Progress. Height of vine 18 to 20 inches. Pods 4½ to 5 inches long, broad, some with curved, pointed, medium dark green containing 7 to 9 large tender peas.

LATE VARIETIES

Tall Telephone. Height of vine 40 inches. Pods 4½ to 5 inches long, broad, plump, straight, pointed, dark green containing 8 to 10 peas of highest quality.

Alderman. Height of vine, pods and color same as Tall Telephone.

Stratagem. Height of vine 26 inches. Pods 4½ inches long, ⅞-inch wide, nearly round, straight, pointed, dark green containing 8 to 10 tender, succulent peas.

Dwarf Telephone. Height of vine 22 inches. Pods 4½ inches long, broad, slightly curved, pointed, containing 8 to 10 peas.

OTHER VARIETIES OF PEAS

Blue Bantam, Hundredfold, Dukes Delight, Champion of England, Dwarf Grey Sugar, Yorkshire Hero.

Klondike Striped Watermelon. A most attractive melon in both outside appearance and especially when cut. The rind is tough, hard and fairly thick. The color is light green with irregular dark green stripes. It does not show sunburn and has proven very desirable for shipping. The size is convenient, the flesh is scarlet and sugar content is higher in the Klondike than in any of the other watermelons. Its edible qualities are truly delicious. This strain has black seeds, splotched and striped with brown at the edges.

Packet, 5c; oz., 15c; ¼ lb., 40c

Radish

All Radishes—Packet, 5c; oz., 15c.

This is the easiest of all vegetables to raise and no garden is complete without at least one or two varieties.

The common Radish will germinate in four to days and if grown properly will have useful roots ready to harvest in twenty-eight to thirty days. If it takes longer than this the roots will be spongy, acid or woody, hence useless. The secret of getting crisp, delicious radishes is quick growth; for this they need a rich mellow soil. Sow the seed about one-third of an inch deep in drills not over 8 to 12 inches apart.

All through the spring a succession should be sown every ten days. Keep in mind that an old radish is a worthless one and being harvested as soon as possible, they must be quickly grown and of course kept thoroughly cultivated. It is advisable to use crude Naphthalene flakes in the soil at the time of sowing seed. This will protect the crop from soil insects such as maggots and worms.

Early Scarlet Turnip. White Tipped. Turnip shaped roots tipped with white. Flesh white, crisp, tender and sweet. Tops small. Matures very early.

French Breakfast or Half Long. Excellent for both home and market gardening. Tops small, roots oblong and blunt. Scarlet with white bottoms; flesh white, crisp and sweet. Splendid quality.

Early Scarlet Globe. Matures very early. A bright carmine-red color. Perfect oval shape and ideal size makes this an excellent radish for market. They reach this size in about 25 or 30 days and are best when not quite full grown. Sweet, crisp and tender flesh of the highest quality.

White Icicle. A popular white radish. Roots long, clear, white, especially mild.

Other Varieties. Early Scarlet Turnip, Long Black Spanish, China Rose Winter, Crimson Giant.

Spinach

All Spinach—Packet, 5c; oz. 15c.

Spinach is a cool season annual, grown for greens. No spinach will stand extreme summer heat without "shooting" seed stalks. For this reason the seed must be sown early in the spring or late in summer to avoid the danger of the crop maturing in July or August. For spring and summer use sow as early as the ground can be worked and make successive plantings every two weeks until May 15th. The leaves will be ready for use four or five weeks after sowing. For Autumn use, sow seed about August 1st. Spinach will grow very large and can be cut from the first of September until the ground freezes.

Improved Thick Leaf. Believed by many as the finest spinach on the American market today. It is the largest-leaved spinach grown and is exceedingly crisp, tender and tasty. It grows rapidly and remains in good condition a long time, making it fine for market. The medium-green leaves are large, rounded, slightly crumpled, succulent, and tender.

New Zealand. Thrives in hot weather in any soil. Leaves comparatively broad and pointed. Will grow through the summer.

Prickly Winter. Hardiest variety. Must be sown in the fall. Seeds prickly. Leaves long, pointed, thick and succulent.

Other Varieties. Nobel Giant Leaved, King of Denmark, Long Standing.

Kohl-Rabi

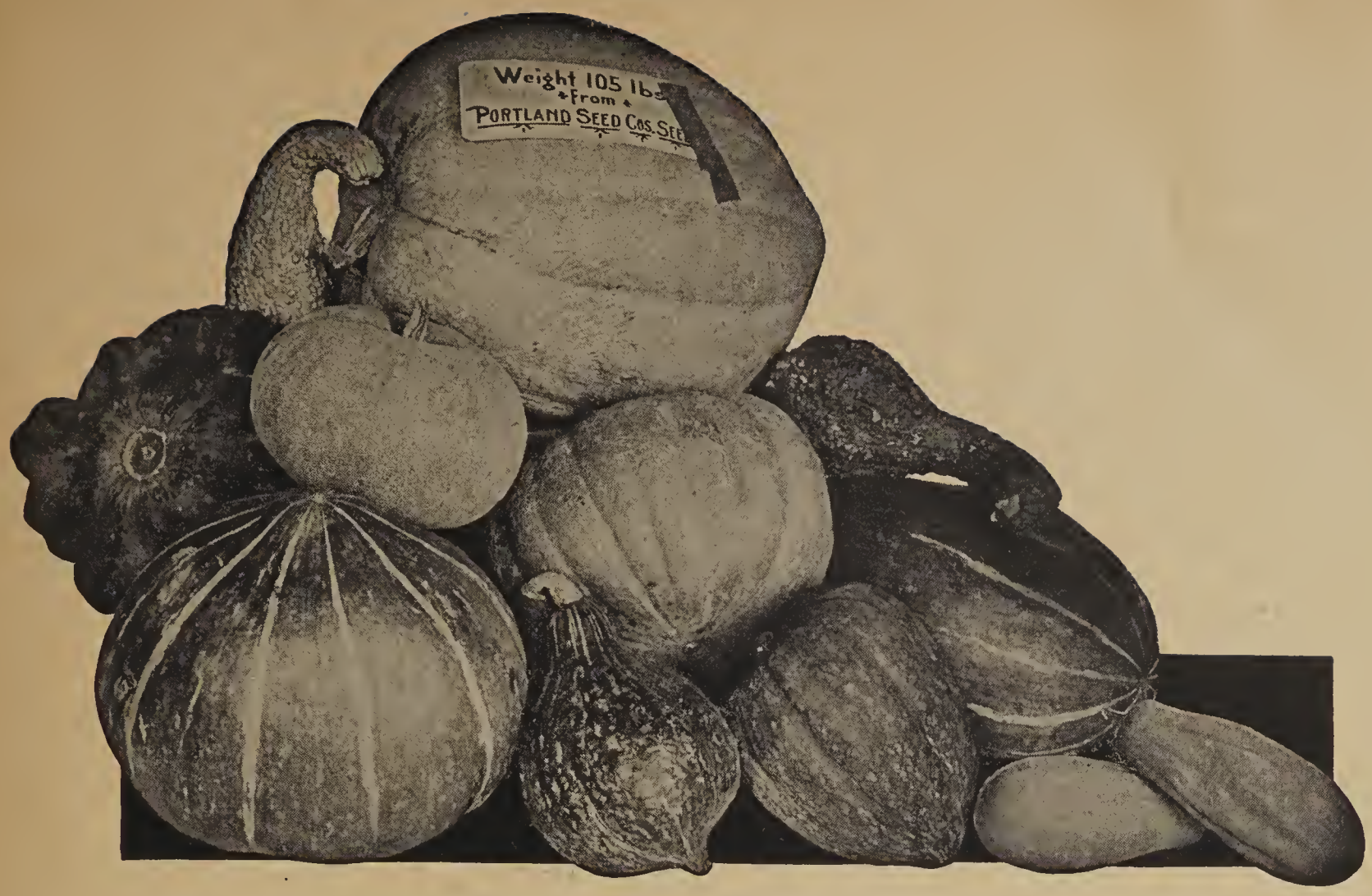
This is a minor member of the cabbage tribe, the erect stem of which is swollen just above the ground level. The swollen part, while still tender and juicy has a fine flavor liked by some, but later it becomes hard, bitter, almost woody, and useless. Kohl-Rabi is closely related to the turnip and by some considered superior.

Its culture is exactly the same as for early cabbage. Kohl-Rabi is set 8 inches apart in the row and the rows can be 18 inches apart.

Whether early or late crops are grown, it is important to secure quick growth and cut the whitish thickened stems before they become tough and woody. The plant will not stand a great deal of heat.

Early White Vienna. This is the best table variety and matures very early. If used for table it is the tastiest when the bulbs are 2 inches in diameter. The plants are light green with white flesh of excellent quality. **Packets, 5c; oz., 20c.**

Early Purple Vienna. Standard early sort. The plants are small, with dark green leaves spotted with purple. The exterior is purple, but flesh is White. **Packets, 5c; oz., 20c.**



Squash

Whatever type of squash is grown, they must be treated as extremely tender annuals, especially the winter and autumn varieties, which in some northern regions will ripen their fruits uncertainly, due to lack of heat and a short growing season. There is generally, except in the coldest regions, no difficulty about raising summer squashes, but all sorts repay quick growth and plenty of heat.

If you have space and prefer to grow the vine-like forms, the hills should be at least 8x8 feet apart, but if space requirements make the bush forms imperative, and they are far easier to grow, cultivate and harvest, the hills can be about 30 inches apart each way.

It is useless to put squashes in a heavy, wet soil, for they grow too slowly in such places. It is better to select a warm sandy loam, upon which they thrive if it can be made rich enough. Being spaced so far apart, there is no use in a program of general soil enrichment for squashes, but every reason for concentrating the fertilizer under the hills. A good plan is to dig out about 2 feet of indifferent soil and fill in with a half-and-half mixture of sandy loam and well-rotted manure. Or if this is lacking, mix about 1 pound of a good complete commercial fertilizer with the soil.

For the summer squashes, unless your soil warms up very slowly, the seed should be planted directly in the hills, 4 to 5 seed to a hill, which should ultimately be thinned to 2 or 3 plants, depending upon their vigor and ravages of cut worms. It will help greatly if Naphthalene Flakes are used at the time of planting.

For the winter squashes or for any that have long, sprawling vines, it is better to start them in the hotbed, as outlined above, if you live in a region with a short growing season. Otherwise, some of the late fruits will be caught by frost before maturity. In any case, the vine-like ones should be watched to see that all the growth does not run to vine and leaf at the expense of fruit. This is especially likely in rich soils or in one that gets extra top-dressing of fertilizer. By keeping vines well pinched back it will develop better fruits.

All Varieties Squash—Packet, 5c; oz., 15c; ¼ lb., 35c, postpaid.

WINTER VARIETIES

Improved Hubbard Squash. Large and of warty Hubbard type. Shell dark green, hard, moderately warted. Flesh light orange, very dry and richly flavored. One of the best winter squashes.

Banana Squash. One to two feet long. Flesh firm, orange yellow. Rind smooth, greyish green color. Excellent flavor and splendid keeping qualities. **Packet, 5c.**

Golden Hubbard Squash. Same in size, shape and quality as the green Hubbard, except that it is bright red or golden color and somewhat earlier. Excellent keeper. **Packet, 5c.**

Table Queen Squash. Small, dark green, acorn shape. Flesh rich yellow, dry, richly flavored. Medium early. A good keeper. **Packet, 5c.**

Other Varieties of Winter Squashes: Boston Marrow, Mammoth Chili, Sibley or Pike's Peak and Warty Hubbard.

SUMMER VARIETIES

Cocozelel or Italian Marrow. Skin dark green, becoming marbled with yellow at maturity. Flesh pale green, thick, firm and tender. Best when 5 to 6 inches long. **Packet, 5c.**

Early Summer Crookneck. Earlier and larger than ordinary crookneck. Skin yellow, thin, hard and warty. Flesh tender and of good quality. **Packet, 5c**

White Bush Scallop. Early, medium size, somewhat flattened with creamy white skin. Flesh milk white, firm and richly flavored. **Packet, 5c.**

Turnips

All Varieties Turnips—Packet, 5c; oz., 15c; ¼ lb. 25c.

Turnip seed sown about the last week in July or early in August will provide a crop when they are most wanted in the late fall and winter. The plant is a biennial and if left in the ground all winter will bloom and set seed the following spring. However, we do not recommend this as the second growth plants are not hardy and many times register a crop failure.

The seeds should be sown in drills about ¾-inch deep and thickly enough so that the plants can be thinned to 5 or 6 inches apart. For hoeing or a wheel cultivator, keep the rows about 15 inches apart.

The plant does best in the loose open loam, and the product is much better if quickly grown. While it is primarily a late fall and winter vegetable very early varieties have been developed which may be sown as soon as the ground can be worked in the spring. Such can be harvested in the early summer, and should be, because if left in the ground they will go to flower and the roots are then soon useless.

Cultivate as for any other root crop, being careful not to injure young roots with tools. The plant responds to rich soil, but top-dressing with nitrate of soda should be avoided. If necessary, use any well-balanced commercial fertilizer, working it in between the rows about 5 weeks after the seed is planted. The turnip is a cool season crop and does not like hot dry regions.

Purple Top White Globe. Large, globe shaped. Purple on top, white below. Excellent quality and highly recommended for home use as well as field crop. **Packet, 5c.**

Purple Top Strap Leaf. An early variety. Roots medium size, flat. Purple above the ground, white below. Flesh white, firm but tender and may be used for table or stock feeding. **Packet, 5c.**

Golden Ball. Medium size, round and yellow. Flesh firm, hard and most excellent flavor. Keeps well and a fine table variety. **Packets, 5c.**

Other Varieties: Early Flat White Dutch, Early White Milan, Early Snowball, Early Purple Top Milan, Pomeranian White Globe, White Egg, Yellow Aberdeen, Cow Horn, Bortfield.

Tomatoes

All Varieties Tomatoes—Packet, 5c; oz., 35c; ¼ lb. $1.00.

The tomato is perhaps more tender than any other garden plant in such general culture. It is blackened by the least touch of frost, and will grow well only where there is sufficient heat. However, while many home gardeners will prefer to buy potted plants at the time they should be planted out, there is little need to do this, for tomatoes are among the easiest of vegetables to raise from seed. In your calculations for the early varieties, allow 7 to 8 weeks from the time of sowing seed to the proper date in your locality for setting the plants in the garden.

The seed should be sown in fine, not too rich soil, about ¼-inch deep, either in tiny drills or broadcast as you prefer. Keep the soil moist but not wet. When the seedlings are about 2½ inches high, brick them out and replant on 2x2 inch intervals and allow them to grow until they are 4 or 5 inches high. By this time they are ready for transplanting into the open ground.

Tomatoes need constant cultivation to keep down weeds and conserve soil moisture, upon which they draw heavily. This is especially true in the early stages of the plants allowed to sprawl. Later these cannot be cultivated without injury to the tender, rather brittle stems.

Any good garden soil will grow tomatoes. Experience has shown that too much (especially nitrogenous) fertilizer or manure close to the plants makes them more likely to produce leafage than fruit. If you are prepared to pinch off the excess leaves, they may be fertilized as for any other rich feeding crop.

Bonny Best. Early, hardy and a scarlet fruit variety. Medium sized, solid, smooth and quite round. Very productive with excellent quality. **Packet, 5c**

Chalk's Early Jewel. Fruits large, bright red, round, smooth, solid and almost seedless. Recommended for market and home gardeners. **Packet, 5c**

Break O' Day. *Wilt resistant.* Vines vigorous open growth and very productive. Fruits scarlet medium to large size true globe shape. Slightly earlier than Mariglobe, an excellent variety for the home and market garden. **Packet, 5c; ounce, 40c; ¼ pound, $1.40.** Prices postpaid.

John Baer. Brilliant round fruits, high crown, smooth and delicious flavor that is easily peeled. Excellent keeper, yields well and a good shipper. **Packets, 5c**

Mariglobe. Very resistant to disease. Fruits are large, globe shaped and deep red. Excellent for slicing and canning. **Packets, 5c.**

Prichard. Newest to be introduced by U. S. Department of Agriculture. Strongest disease resisting tomato yet offered. No core, small seed pockets and evenly colored throughout. **Packets, 5c.**

Other Varieties: Dwarf Champion, Burbank, Stone, Golden Queen, Yellow Pear, Yellow Plum and Ground Cherry. **Packets, 5c.**

VEGETABLE SEED PLANTING CHART

KIND OF SEED	Time to Plant Outdoors	Distance for Plants		SEED REQUIRED		Ready to Use
		Bet. Rows	In the Row	Row	Acre	
ASPARAGUS	February to April	5 to 6 ft.	18 to 24 in.	1 oz. to 40 ft.	2 to 3 lbs.	2nd Spring
BEANS, Bush	April, May and June.	2 to 3 ft.	3 to 4 in.	1 lb. to 250 ft.	90 to 100 lbs.	40 to 65 days
BEANS, Pole	April, May and June.	4 ft.	2½ to 3 ft.	1 lb. to 125 hills	30 to 40 lbs.	70 to 90 days
BEANS, Lima	May and June	2 to 4 ft.	10 to 36 in.	1 lb. to 80 hills	50 to 60 lbs.	90 to 130 days
BEETS, Table	March to July	14 to 20 in.	2 to 4 in.	1 oz. to 100 ft.	10 to 15 lbs.	45 to 60 days
BROCCOLI*	June to August	24 to 30 in.	14 to 18 in.	1 oz. to 1500 plants	6 to 8 oz.	120 to 150 days
BRUSSEL SPROUTS*	April to June	30 to 36 in.	18 to 24 in.	1 oz. to 2000 plants	6 to 7 oz.	100 to 120 days
CABBAGE, Early*	February to April	30 to 36 in.	16 to 24 in.	1 oz. to 2000 plants	6 to 8 oz.	90 to 110 days
CABBAGE, Late*	May and June	36 to 42 in.	24 to 30 in.	1 oz. to 2000 plants	6 to 7 oz.	110 to 120 days
CARROTS	April to July	12 to 24 in.	2 to 3 in.	1 oz. to 250 ft.	3 to 4 lbs.	55 to 80 days
CAULIFLOWER*	March to June	3 to 4 ft.	24 to 30 in.	1 oz. to 1500 plants	6 to 7 oz.	95 to 110 days
CELERY*	April to July	18 to 36 in.	6 to 10 in.	1 oz. to 8000 plants	4 to 5 oz.	120 to 150 days
CHICORY	March to May, Sept.	16 to 20 in.	6 to 8 in.	1 oz. to 200 ft.	3 to 4 lbs.	90 to 120 days
CHIVES	April and May	12 to 18 in.	4 to 6 in.	1 oz. to 200 ft.	4 to 5 lbs.	125 to 150 days
SWEET CORN	April to June	36 to 42 in.	9 to 12 in.	1 lb. to 100 hills	12 to 15 lbs.	55 to 90 days
CRESS	Feb. to May, Sept.	12 to 18 in.	4 to 6 in.	1 oz. to 250 ft.	3 to 4 lbs.	45 to 60 days
CUCUMBER	April to July	4 to 6 ft.	10 to 12 in.	1 oz. to 100 hills	2 to 3 lbs.	50 to 75 days
EGG PLANT*	April and May	24 to 30 in.	18 to 24 in.	1 oz. to 1500 plants	4 to 5 oz.	125 to 140 days
ENDIVE	May and June	18 to 20 in.	10 to 12 in.	1 oz. to 300 ft.	3 to 4 lbs.	90 to 100 days
HERBS, Annual	March and April	20 to 24 in.	10 to 12 in.	1 oz. to 200 to 600 ft.	3 to 10 lbs.	125 to 150 days
HERBS, Perennial	April to June	20 to 24 in.	10 to 12 in.	1 oz. to 200 to 600 ft.	3 to 10 lbs.	Next Season
KALE	Mar. and Apr., Aug.	18 to 24 in.	12 to 18 in.	1 oz. to 2000 plants	6 to 8 oz.	55 to 60 days
KOHL RABI	March to May	16 to 24 in.	6 to 8 in.	1 oz. to 300 ft.	3 to 4 lbs.	50 to 70 days
LEEK	May to June	14 to 20 in.	4 to 6 in.	1 oz. to 150 ft.	4 to 5 lbs.	120 to 150 days
LETTUCE, Leaf	March to September.	12 to 18 in.	4 to 6 in.	1 oz. to 600 ft.	4 to 5 lbs.	40 to 70 days
LETTUCE, Head	February to August.	12 to 16 in.	12 to 14 in.	1 oz. to 3000 plants	1 to 1½ lbs.	70 to 90 days
MUSKMELON	April to June	6 to 8 ft.	4 to 6 ft.	1 oz. to 40 hills	3 to 5 lbs.	90 to 150 days
WATERMELON	May and June	8 to 12 ft.	6 to 10 ft.	1 oz. to 25 hills	4 to 6 lbs.	100 to 160 days
MUSTARD	March to May, Sept.	12 to 18 in.	2 to 3 in.	1 oz. to 600 ft.	4 to 5 lbs.	60 to 90 days
OKRA*	April and May	2½ to 3 ft.	18 to 24 in.	1 oz. to 250 plants	5 to 6 lbs.	70 to 90 days
ONION, Seed	April and May	12 to 18 in.	2 to 4 in.	1 oz. to 200 ft.	4 to 5 lbs.	125 to 150 days
ONION, Sets	October to May	12 to 18 in.	2 to 3 in.	1 lb. to 50 ft.	2 to 3 sacks	50 to 70 days
PARSLEY	March to May, Sept.	18 to 24 in.	12 to 16 in.	1 oz. to 250 ft.	3 to 4 lbs.	65 to 90 days
PARSNIP	April to June	15 to 20 in.	2 to 4 in.	1 oz. to 300 ft.	4 to 6 lbs.	130 to 145 days
PEAS, Dwarf	Nov. & Feb. to June.	18 to 24 in.	1 to 2 in.	1 lb. to 120 ft.	150 to 175 lbs.	45 to 75 days
PEAS, Tall	Nov. & Feb. to June.	4 to 6 ft.	1 to 2 in.	1 lb. to 120 ft.	100 to 125 lbs.	60 to 90 days
PEPPER*	May and June	18 to 24 in.	14 to 16 in.	1 oz. to 1500 plants	3 to 4 oz.	130 to 150 days
POTATOES, Irish	March to June	24 to 36 in.	14 to 18 in.	1 lb. to 15 ft.	7 to 9 sacks	90 to 150 days
PUMPKIN	May to July	8 to 12 ft.	6 to 8 ft.	1 oz. to 30 hills	4 to 5 lbs.	75 to 90 days
RADISH	February to Sept.	12 to 18 in.	1 to 2 in.	1 oz. to 100 ft.	8 to 10 lbs.	20 to 75 days
RHUBARB	March to June	30 to 36 in.	16 to 24 in.	1 oz. to 250 ft.	6 to 8 oz.	3rd Year
RUTABAGA	May and June	18 to 24 in.	6 to 8 in.	1 oz. to 400 ft.	2 to 3 lbs.	90 to 120 days
SALSIFY	March to May	18 to 24 in.	2 to 4 in.	1 oz. to 120 ft.	8 to 10 lbs.	120 to 150 days
SPINACH	Feb. to May, Sept.	12 to 18 in.	3 to 6 in.	1 oz. to 100 ft.	10 to 12 lbs.	45 to 60 days
SQUASH, Bush	April to June	3 to 4 ft.	3 to 4 ft.	1 oz. to 30 hills	4 to 6 lbs.	65 to 70 days
SQUASH, Winter	May to July	10 to 12 ft.	8 to 10 ft.	1 oz. to 15 hills	3 to 4 lbs.	120 to 140 days
SWISS CHARD	March to July	12 to 18 in.	4 to 8 in.	1 oz. to 150 ft.	6 to 8 lbs.	45 to 60 days
TOMATO*	April to June	3 to 4 ft.	2 to 3 ft.	1 oz. to 3000 plants	3 to 4 oz.	125 to 150 days
TURNIP	March to August	12 to 15 in.	3 to 4 in.	1 oz. to 400 ft.	2 to 4 lbs.	45 to 90 days

* Planting dates shown for crops marked "*" are intended to be for setting plants into the garden. Seeds should be sown 40 to 60 days earlier, indoors or under glass.

Seed should be covered from three to five times its diameter. Press soil down firmly. Keep moist continuously.

The above chart gives distances between rows for hand cultivation; where horse or tractor is used the rows should be farther apart.

Now About Fertilizer

All 11 Elements — No Phosphorus — No Potassium

No Nitrogen — No Calcium — No Magnesium

No Sulphur — No Iron — No Boron

AS, here, and usually understood, fertilizers include the so-called artificial, or chemically prepared, commercial fertilizers, but not manure, the latter being mostly of animal origin.

A complete fertilizer should theoretically contain all the plant food that could be derived from a perfect soil. But plants use so many different chemical elements and their compounds, and so many of them are present in more than adequate amounts in all soils, that a complete fertilizer is now understood to contain the three most essential elements only—nitrogen, phosphoric acid, and potash. It is upon these three, especially nitrogen, that the fertility of most soils depends, and all commercial fertilizers contain these substances in varying ratios, depending upon the crop and the soil to which the fertilizer will be added.

No one today needs to buy fertilizers blindly. They are forced to contain a specified amount of available nitrogen, phosphoric acid, and potash, and their claims are checked by the chemists of the Department of Agriculture.

The uninitiated, however, can still be misled, or can buy fertilizers wastefully, by not understanding exactly what the figures on a fertilizer bag means. It is, for instance, a common thing to see a bag labeled 4-12-4, or almost any other combination of three numbers separated by hyphens. Throughout the United States such figures always mean that the first figure is the percentage of nitrogen, the second the percentage of phosphoric acid, and the third the percentage of potash, in the mixture.

Many intelligent gardeners often ask why use commercial fertilizers at all, considering that it is only since the rise of industrial chemistry that they have been available. This is true, and if manure in sufficient quantities could be found, chemical fertilizers would not be needed. But the motor age and the passing of the horse have made animal manure rather scarce and really quite expensive when you consider the amount it takes in order to get the same results that a small amount of commercial fertilizer will give.

Before coming to specific fertilizer suggestions for different crops, it will make them more intelligible to understand and the role of the constituents.

NITROGEN. The most valuable, most expensive, and soonest exhausted of all fertilizer constituents. It is necessary for leaf growth and in general, all plant growth above the ground. Large amounts produce a rank, tender growth of a dark green color. The quickest-acting and most effective source of nitrogen is nitrate of soda. It is available almost as soon as applied to the ground as it dissolves at the first rain and is immediately available. Its disadvantage is that, once applied, it is soon lost (absorbed by the crop) and consequently builds up little or no residue of nitrogen for later crops. But other sources of nitrogen will supply this deficiency.

One of them is bone meal. This ground-up bone dust dissolves much more slowly than nitrate of soda and is consequently of value in small gardens, as top dressing for pots, frames, or for feeding house plants. And because of its slow action, it is safer to use than nitrate of soda, an overdose of which can easily injure or even kill a crop. Bone meal also contains much phosphoric acid.

Other valuable sources of nitrogen are tankage and dried blood. both prepared by-products of the slaughter houses, and, like bone meal, more useful for permanent enrichment than for quick effects. Calcium nitrate, sulphate of ammonia are also valuable sources of nitrogen.

PHOSPHORIC ACID. This, mostly supplied by rock phosphates and superphosphates, is, next to nitrogen in importance. Its especial function is the stimulation of cereal crops, but it is also absolutely necessary for most vegetable and flower crops. Many soils are deficient in phosphorus and the lack of it often slows up final crop production. Phosphoric acid causes the development of fibrous roots, increases disease resistance, and hastens maturity.

POTASH. The chief use of potash is the stimulation of root crops like beets, carrots, turnips, radishes, and parsnips. But as part of the balanced ration for perfect growth, potash must be a constituent of all fertilizer mixtures. It is used chiefly in the form of muriate of potash for vegetables, and sulphate of potash for potatoes. Wood ashes contain from 4 to 6 percent of potash.

Potash is necessary for the formation of starch and its transference to various parts of the plant. It also increases resistance to disease. All crops require potash for proper growth, but it is especially valuable for cabbage, celery, and the root crops.

While different plants need different amounts of these three substances, only a "straights" (such as nitrate of soda) are applied alone, and this where special crops are being raised in soils definitely lacking in one element. Most fertilizers contain judicious mixtures of the three, hence the common advertising of so-called "complete fertilizers."

Turf and Lawn Grass Seed

Astoria Creeping Bent. This is the most popular of all the Bents for lawn purposes. Does well on practically all types of soil and will withstand severe cold much better than other Bents. It has a beautiful pleasing green and a fine velvety texture, forming a matted turf that improves with age and will stand much hard wear. *One pound to 250 square feet.*

Pacific Creeping Bent. This is a grade of Bent that usually consists of two or more other bents the larger percentage being Astoria Bent. Is adapted to practically all types of soil and produces an exceptionally fine turf.

Certified Seaside Bent. Discovered and developed in the vicinity of Coquille, Oregon. This is a surface creeping bent. Adapted to putting greens and golf courses, and makes a desirable addition to lawn grass mixtures.

Chewings Fescue. A hardy fine leaved grass adapted to all types of soil. Produces a permanent close turf and one that will withstand hard usage. *Sow one pound to 200 square feet.*

Poa Trivialis or Shady Blue Grass. This particular variety of grass is adapted to shady places. Its habits of growth are very similar to Kentucky Blue Grass.

Diamond Fancy Lawn With Creeping Bent. This mixture contains sufficient Astoria Creeping Bent to eventually predominate the lawn. In addition to the Creeping Bent the proper amounts of Bule Grass, Poa Trivialis and Chewings Fescue have been added so as to give you a mixture that will produce a fine velvety turf, and at the same time allowing the Bent grass to eventually predominate. *Sow one pound to 200 square feet.*

Diamond Fancy Lawn Grass Mixture. Prepared from the choicest recleaned grass seeds carefully selected for their fineness, their deep rooting, close growing habits and seasonal qualities, producing an ideal dense velvety turf of lasting quality that remains green throughout the year. This mixture is composed of the correct proportions of Kentucky Blue Grass, Chewings Fescue, Poa Trivialis and Red top which are required in making a true Diamond Fancy Lawn grass mixture. *Sow one pound to 200 square feet.*

Diamond Shady Lawn Mixture. This mixture is especially selected for lawns that are more or less shady. Poa Trivialis grows in most shady spots where other grasses fail, therefore, we have increased the amount of Poa Trivialis in this mixture and at the same time give you the correct amounts of Blue Grass, Red Top and Chewings Fescue to produce fine velvety turf. *Sow one pound to 200 square feet.*

Rough Stalk Meadow Grass (Poa Trivialis). Very similar to Kentucky Blue Grass, in habits of growth. Adapted to moist soils and thrives in shady places, for this reason it is used for lawn purposes. Owing to its ability to thrive in the shade it is often called Shady Blue Grass.

Kentucky Blue Grass (Poa Pratensis). *20 pounds per acre.* A Perennial with a widely creeping root stock. Producing runners and leafy shoots. The runners creep under the surface, rooting from the joints and finally producing upright leafy stems growing from 1 to 3 feet high. Bluegrass prefers well drained loams and does especially well on limestone soils. It prefers medium moist conditions although it is quite resistant to drouth. Is extremely hardy, will withstand severe frost and long covering of snow without injury. It is the most important of all pasture grasses and is extensively used as a lawn grass and in lawn grass mixtures.

Red Top (Agrostis Vulgaris). *12 pounds per acre.* A hardy Perennial having a wide range of soil and climatic adaptation. Thrives best on moist or wet soils and will withstand considerable drouth on poor uplands. Grows about 30 inches high, stems and leaves are fine, root stalks shallow, 2 to 6 inches long. These enable it to form a dense turf. Is generally used as a pasture plant and in pasture mixtures and is also used in lawn grass mixtures. Continual mowing causes the leaves to become much finer, giving very satisfactory lawn results.

English Ryegrass (Lolium Perennial). *25 pounds per acre.* A Perennial Rye Grass quite similar in general appearance to Italian Rye Grass, growing from 2 to 4 feet in height. Differs, however, in quality, the plants are in general quite tough which makes it an unpopular grass for lawns. Makes an excellent plant for permanent pastures. Starts quickly and furnishes early grazing while other long-lived grasses are becoming established. Requires the same soil and climatic conditions as other Rye grasses.

Oregon Rye Grass. *25 pounds per acre.* This distinctive type of Ryegrass is common to the Pacific Northwest, west of the Cascade Mountains. It resembles Italian quite closely in habits of growth and is generally considered to be an annual although under pasture conditions in moist sections the plants may live two or three years. It makes a rapid growth, is winter hardy, stools heavily, producing an abundance of large dark green leaves and numerous fine stems. When used for hay has rapid comeback when moisture conditions are favorable. On account of its rapid growth fits well into pasture mixtures while longer lived plants are becoming established. Rye grasses have a wide range of soil adaptability making better growth than most grasses on lands of low fertility.

For complete information about planting or renovating a lawn, please turn back to page 7 "Growing Better Lawns."

Agricultural and Field Seed

Grimm Alfalfa. *15 pounds per acre.* The most important member of the variegated group in the United States. Introduced from Germany by Wendelin Grimm.

A very winter hardy, long-lived variety. The tap root shows a tendency to branch and the crowns are low set and spreading. These characteristics contribute much toward its ability to resist extreme cold, alternate freezing, thawing and heaving. Succeeds in most types of soil except those heavily charged with alkali, will not grow in waterlogged soil.

It is very important that all Alfalfa seed be inoculated with Nitragin A.

Cossack Alfalfa. *15 pounds per acre.* An introduction from Russia and a hybrid between common and yellow-flowered Alfalfas.

Growth is generally upright with stems medium in size, plants are very leafy with fairly large leaves. Flowers are variegated ranging from white and yellow to dark purple.

Rooting system is large with heavy deep penetrating tap root being the rule. A very winter hardy variety adapted for growing under practically the same conditions as Grimm Alfalfa.

Inoculate seed with Nitragin A.

Common Alfalfa. There are various strains of common Alfalfa produced in the United States and are usually distinguished by the name of the state in which grown, such as Idaho, Oregon, Northern California, etc. Common Alfalfa from above named sections is adapted to Oregon and Washington climatic conditions. Common Alfalfa differs from the Grimm Alfalfa mainly in the root system. The tap root in common does not show the tendency to branch and the crowns are not as spreading.

Inoculate all seed with Nitragin A.

Ladak Alfalfa. An introduction from Northern India.

The growth in general is quite upright with stems medium size, plants are very leafy, medium size leaves. Flowers are variegiated ranging from whitish and yellow to very dark purple.

The rooting system is extensive, with most plants being tap rooted.

One of its outstanding characteristics is its ability to produce a heavy first crop. It is sometimes referred to as one-cut Alfalfa, mainly for the reason, that under certain conditions its comeback is rather slow. It is very well adapted to conditions where only one crop of forage can be secured a year because of lack of moisture and short growing season.

It is extremely winter hardy, and long-lived and is much more resistant to bacterial wilt than Grimm, Common and other varieties closely related to these.

Inoculate seed with Nitragin A.

Alsike Clover (Trifolium Hybridum). *12 pounds per acre.* A long-lived Perennial, adapted to a wider range of both climatic and soil conditions than Red Clover. Thrives well on clay, clay loams, sandy loams and muck soils providing abundant moisture is available. Will survive where soil is waterlogged, making it well adapted to growing under irrigation. An excellent pasture plant and when sown for hay is usually mixed with Red Clover, Timothy or Red Top.

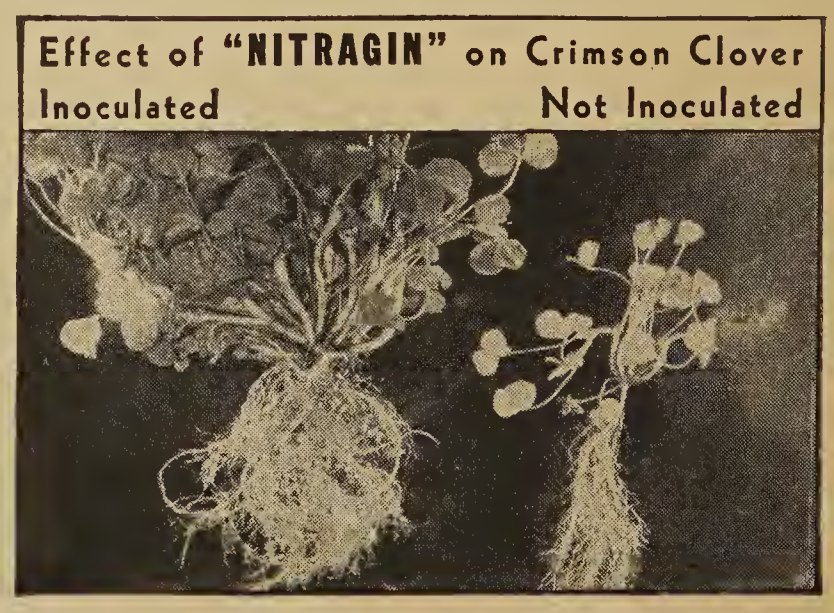
To insure a good stand always inoculate your seed with Nitragin B.

Red Clover (Trifolium Pratense). *15 pounds per acre.* Usually classed as a short-lived perennial and is considered the most important of all leguminous forage crops. Requires a well drained soil, does better in clay soils than in loams and better in loams than in sandy soils. Is especially intolerant to waterlogged soils.

Do not fail to inoculate your seed with Nitragin B.

White Dutch Clover (Trifolium Repens). *8 pounds per acre.* A long-lived but shallow rooted perennial. The stems creep on the surface of the ground and root abundantly. On this account the growing point is seldom injured by mowing or grazing. Grows in practically all types of soil provided moisture is abundant, thriving best in loams and clay soils. White clover is considered to be one of the most important pasture plants, generally used in pasture mixtures and is also used to a large extent in lawn grass mixtures.

Ladino Clover (Trifolium Repens latum). *5 pounds per acre.* Also known as giant white clover, growing about twice the size of White Dutch Clover. It is a Perennial of medium long life, having a short tap root. The surface stems lie flat on the ground and commonly produce fibrous roots at the joints. Ladino clover usually makes a growth of 8 to 12 inches in height. Can be grown on rather shallow soils where well supplied with lime, phosphate, humus and moisture. Ladino is not a deep rooted plant and thrives best on medium heavy type soils where there is constant but not excessive moisture. This is primarily a pasture plant and may be sown alone or with a combination of other grasses.



NITRAGIN
The Original Legume Inoculator

INOCULATOR PRICES
When Ordering, Always Specify Name of Seed

Alfalfa, all Clovers

Size	Retail
½ bu. ea.	$ .30
1 bu. ea.	.50
2½ bu. ea.	1.00

Lespedeza Unhulled or Hulled

Size	Retail
1 bu. ea.	$ .30
2 bu. ea.	.50
5 bu. ea.	1.00

Vetch, Austrian Peas, Canadian Peas, Beans

½ bu .ea.	$ .25
1 bu. ea.	.40
*1⅔ bu. ea.	.60
5 bu. ea.	1.70
*12½ bu ea.	4.00

*"100 lb." & 12½ bu. size, packed only for Vetch & Peas

Peanuts, Soy Beans, Cow Peas, Lima Beans

1 bu. ea.	$ .30
2 bu. ea.	.50
5 bu. ea.	1.00
10 bu. ea.	1.60
*25 bu. ea.	3.00

*25 bu. size, packed only for Soy Beans, Cow Peas, Peanuts

Nitragin Garden Size for Garden Peas, Beans, Sweet Peas, Lima Beans and Lupines. Enough for 4 lbs. seed.

Retail Price.....10c each

Mammoth Red Clover (Trifolium Pratense Perenne). *15 pounds per acre.* A large variety of red clover more decidedly Perennial than common Red Clover requiring the same climatic and soil conditions. The stems are long, coarse and generally spreading. Mammoth red blooms about 10 days later than common red and grows more slowly after mowing. Its coarse growth makes the hay less relished by stock, however its heavy growth makes it an excellent soiling crop.

Inoculate the seed with Nitragin B.

White Sweet or Bokhara Clover (Melilotus Alba). *20 pounds per acre.* A Biennial having a strong tap root, produces numerous leafy stems, growing from 4 to 6 feet in height when firmly established. Grows readily on practically all types of soils. Endures poorly drained soils better than Alsike, used mainly as a pasture plant and for green manure.

Inoculate with Nitragin A.

Crimson Clover (Trifolium Incarnatium). *15 pounds per acre.* An annual plant having a strong tap root, shows on very marked soil preferences, succeeding on both sandy and clayey soils as long as they are well drained. From the crown of the root numerous upright stems develop which reach an average height of one or two feet. Has a high nutritive value and can be used for either hay or pasture, valuable for soiling purposes in short rotations, as the green matter produced is heavy, and the roots penetrate deep into the ground

All seed should be inoculated with Nitragin B.

Yellow Sweet Clover (Melilotus Officinalis). *20 pounds per acre.* A biennial having the same habits of growth as the White Sweet, requiring the same soil and climatic conditions. Stems are less leafy and smaller in size. The plant does not grow quite as tall and is about two weeks earlier.

Inoculate with Nitragin A.

Yellow Sweet Clover Annual (Melilotus Indica). *20 pounds per acre.* Known as Yellow Blossom sour clover. Not recommended for forage or hay, used most entirely for cover crop. Soil requirements same as other sweet clovers.

Inoculate with Nitragin A.

Brome Grass (Bromus Inermis). *20 pounds per acre.* A long-lived Perennial with a creeping root-stock. These are much branched, roots at the joints and produces numerous upright stems. The stems are rather stout from 1 to 4 feet high, and carry many spreading, broad smooth leaves varying from light to dark green. The upright stems produced are scattered, therefore, the plants are not tufted but form loose mats. Brome Grass is adapted to regions of rather low rainfall, endures winter cold remarkably well and no other cultivated Perennial grass has shown a higher degree of drouth resistance. Prefers rich loams and clay loams and has succeeded well in sandy soils.

Buckwheat. *25 pounds per acre.* An erect growing Annual which under ordinary conditions attains a height of about 3 feet. Is not exacting as to soils. The rather light, well drained sandy loams seem best suited, however, good crops are produced on infertile, poorly tiled land.

Buckwheat is very sensitive to frost, however, the crop may be grown far toward the north. This is due to the short growing season of the plant amounting from 10 to 12 weeks. Japanese and Silverhull are the most commonly grown in the United States.

Cheat or Chess (Bromus Secalinus). A smooth annual grass from 1 to 3 feet tall with flat blades and open drooping panicles, sometimes grown as an annual hay crop, and should be cut when the seed is in the dough stage. Adapted to the same soil conditions as wheat. The plants are similar to those of wheat and formerly the idea was held that cheat was a degenerative or changed form of wheat whence its name.

Crested Wheat Grass (Agropyron Cristatum). *15 pounds per acre.* A hardy drouth-resistant Perennial bunch grass having an extensive root system, especially adapted to regions where the temperatures are severe and the moisture supply is limited. The plants have a dense, dark green foliage during the early part of the season, after seeding the plants appear less leafy but the stems are fine and when harvested early makes hay of excellent quality, does well on practically all soils ranging from light sandy loam to heavy clay.

Dwarf Essex Rape. *8 pounds per acre.* There are several varieties of rape, however, Dwarf Essex is considered to be the best, in fact is the only one used for pasture and forage crop purposes. Rape is termed as a cool weather plant therefore is adapted to our cool moist climate here in the Northwest and is not very exacting as to soil requirements.

Rape is used extensively as a pasture plant for sheep, cattle and hogs and is generally sown in the spring when used for such purposes. It may also be used as a catch crop occupying the land for short periods or at times when it is desired to have a crop on the land between two regular season crops.

Lespedeza. *15 pounds per acre.* Classed as a summer annual, however, in sections where adapted will usually reseed itself and will thus occupy the land for two or more years. The plants are usually much branched, stems wiry, bearing numerous small leaves, under favorable soil and climatic conditions

the plants commonly grow about 12 inches high. Adapted to practically all types of soil if well drained near the surface. Requires a warm growing season and will not withstand frost. Used mainly as a pasture plant.

Meadow Fescue (Festuca Elatior). *20 pounds per acre.* A deep-rooted, long-lived Perennial. The stems are 18 to 24 inches high, smooth, rather slender. Most of the leaves are produced by numerous sterile shoots from the root stock. The leaves are dark green, long and broad. Prefers rich moist or even wet soils, does not succeed well in sandy soils. Thrives as well as Orchard grass in shady places. It is better adapted for pastures than for meadows but may be used for both purposes.

Millet. *25 pounds per acre.* The millets are rapid growing annuals used primarily for forage production purposes. Requiring in general the same climatic and soil conditions as Sudan grass. The plants usually attain a height of three to four feet. The stems are erect, rather stiff and the leaves are long and broad.

The seed should not be sown until the ground is warm, usually about corn planting time.

Several varieties are used here in the Northwest, the most popular being German or Golden, Early Fortune or Hershey and Japanese, also known as Billion Dollar Grass.

Mesquite (Holcus Lanatus). *20 pounds per acre.* This plant is primarily adapted to moist cool climates and under such conditions is not particular as to soil.

The plants form thick, rather high tussocks. The stems are erect, growing from 2 to 3 feet high. The whole plant has a velvety appearance hence the name Velvet Grass is sometimes used. Mesquite should be sown with a mixture of other grasses, as stock does not take to it readily when grown alone.

Orchard Grass (Dactylis Glomerata). *25 pounds per acre.* A long-lived Perennial forming dense circular tufts, a typical bunch grass producing no stolons and hence never forms a complete sod. The stems are 2 to 3 feet high and are crowned and surrounded at the base by numerous heavy shoots. The leaves are long, broad and flat, rather soft in texture. Grows in practically all types of soils, being best adapted to clays or clay loams. Succeeds well in shady places and also does quite well where rainfall is rather scanty, starts growth early in the spring.

Pasture Mixtures. *35 pounds per acre.* Owing to the fact that so many types of Pasture Mixtures are used, we realize that it would be impossible for us to prepare in advance mixtures that would conform with the requirements of each formula recommended.

Therefore we have confined our efforts to two Pasture Mixtures only, namely UP-LAND and LOW-LAND. In these two mixtures we use only the very best grades of seed carrying a high percentage of Purity and Germination and only those seeds that are adapted to the general soil and climatic conditions throughout the Pacific Northwest and for this reason we feel that either of these two mixtures will meet with the average general requirements.

Reed Canary Grass (Phalaris Arundinacea). *8 pounds per acre.* A long-lived rather coarse Perennial grass. The plants are resistant to cold both as seedlings and mature plants. The rapidly spreading short underground stems soon form a dense sod growth, starts early in the spring and continues until late fall. The plants grow from 4 to 6 feet in height. The stems are stout, smooth and seldom lodge. The leaves are broad and nearly 1 foot long.

Reed Canary is especially adapted to swampy or overflow lands of sandy, mucky or peaty nature, makes an excellent pasture plant and may also be used for hay.

Italian Ryegrass (Lolium Multiflorum Lam). *25 pounds per acre.* A hardy short-lived grass usually an annual. When seeded in spring, late summer or early fall, it makes rapid growth, furnishing grazing in remarkably short time. It is tender, very palatable to livestock and has excellent carrying capacity. The plants grow from 2 to 4 feet in height. Since Italian Ryegrass is a heavy seeder, if not kept closely grazed or mowed many new plants appear from volunteer seeding. Adapted to the same soil and climatic conditions as other ryegrasses.

Sudan Grass (Andropogon Sorghum). *25 pounds per acre.* A tall annual, growing under favorable conditions to height of 4 to 6 feet. The stems are fine, leafy, perfectly erect, seldom lodging.

The plants stool abundantly and owing to the lack of root stocks never become troublesome as a weed. Sudan is grown primarily for forage production purposes and should not be sown until the soil is warm, usually about corn planting time. Many failures are traced direct to seeding in a cold soil. In general climatic and soil adaptations for Sudan are nearly identical with those of corn.

Tall Meadow Oat Grass (Arrhenatherum Elatius). *30 pounds per acre.* A long-lived, deep-rooted Perennial. Strictly a bunch grass growing to a height of 4 to 5 feet. The stems are generally dark green, leafy above the middle. The leaves are long, broad and rather soft in texture, usually a bright green almost yellowish. Can be grown on practically any kind of soil provided it is fairly moist, will not endure wet soils. It is one of the most drouth resistant of the cultivated grasses. Makes a quick start after pasturing and stands pasturing well. One of the first grasses to start in the spring and the last to die in the fall.

Timothy (Phileum Pratense). *15 pounds per acre.* A Perennial grass having a very short root stock and therefore grows in more or less compact tuffs. The stems which usually reach a height of from one to four feet or more are smooth and generally erect. The leaves are generally short compared with the height of the plant. Timothy is adapted to cold, moist or wet lands also heavy clay soils. However, does not thrive on sour soils or impoverished sandy or shallow soils. Although root system is shallow it stands drouth fairly well. It is very resistant to cold.

Poa Bulbosa (Winter Blue Grass). *25 pounds per acre.* A perennial, and under suitable conditions forms a perpetual sod, reseeds itself freely, spreading both by the bulbs produced beneath the surface of the soil and bulblets on the head. This grass reverses the normal order of growth, being entirely dormant during the entire summer. The plants revive after the first fall rains, producing pasture throughout the late fall, winter and spring. Seed should be sown during the fall.

Soy Beans. *50 pounds per acre.* The Soy Bean is a leguminous Annual growing to a height of 10 inches or more depending on soil conditions. The plant is erect and branching, quite leafy and producing numerous pods. The leaves vary in size and color depending on the variety. Soy Beans are a promising emergency Leguminous hay crop for various places here in the Northwest.

Soy Beans grow on rather a wide range of soils, are quite drouth resistant, and will stand excess moisture providing the water does not stand for any considerable length of time.

Should be sown about corn planting time, rows about three feet apart and the seed about 3 or 4 inches apart in the row.

All seed should be inoculated with Nitragin "S".

Vetches make excellent feed, either green or as hay, and are also exceedingly useful as cover and green manure crops. They are usually seeded with grain, oats being the favorite for the reason separation is easily made when harvesting vetch for a seed crop.

Common Vetch. The most important annual legume grown in Oregon, used extensively as a green feed crop for spring and summer, also makes an excellent green manure and cover crop. Vetch is best suited to a moist cool climate free from extremes of heat or cold during the growing season. Is adapted to heavy well drained soils. The stems are slender growing from 3 to 5 feet or more in length, semi-erect. The leaves are pinnate, with about seven pairs of leaflets and a terminal tendril. The flowers are violet purple rarely white and are borne in pairs on a very short stalk.

Hungarian Vetch. A fine stemmed annual making a semi-erect growth 2½ to 4 feet in length and somewhat hairy overall. The flowers are brownish white in color and are borne in groups of from two to eight. Hungarian Vetch is quite winter hardy and is adapted to a wide range of soils, lands with poor drainage and lands that are heavy, sour and white will often produce crops of Hungarian Vetch while other crops have failed.

Hairy Vetch, also known as Sand Vetch. The stems are slender, usually growing to an average length of 6 to 8 feet. The leaves are narrow, violet blue borne on long stems in dense one-sided clusters of about 30. Hairy vetch is quite winter hardy rarely winter killing if well established in the fall, adapted to a wide range of soils doing best on sandy or sandy loams but does not succeed in very wet soils.

Austrian Winter Field Peas. A true winter variety. Plants resulting from fall seedings pass through a definite period of winter dormancy before growth begins in the spring. The plants are viny, generally similar to other varieties of field peas under average conditions attain a length of 3 to 4 feet. The blooms are purple. The peas are very hardy, zero temperatures do little damage unless freezing and thawing periods are severe. They are adapted to well drained clay and sandy loams. The Austrian pea is used for all types of forage such as hay, silage, soiling and pasture.

Canadian Field Peas. Quite similar to the Austrian Winter Field Pea. The stems and leaves are somewhat larger and the blooms are white. The variety is not winter hardy, being adapted only to moderate temperatures. They do best on loams or clay loams but will succeed on most types of soil if well drained.

The Canadian Field Pea is used for practicallv the same purposes as the Austrian in general farming. Both varieties are usually sown with a small grain crop.

Jerusalem Artichokes. The Artichoke is an annual reproduced by tubers somewhat similar to potatoes.

The plants grow from 4 to 12 feet in height, the stalks are medium coarse often heavily branched and very leafy and bear small yellow blossoms on the tips of the upper branches and main stalks.

In general the tubers are rough and vary from the elongated, usually slender to the almost round types, the flesh is white, eyes small and the surface coloring varies from red and blue to white and yellow.

Artichokes are adapted to practically all types of soil except those heavily charged with alkali.

Artichokes are planted like potatoes using the same machinery and following the same general practices. When planting whole tubers use 800 to 1000 pounds depending on the size of the Tubers. When cut in pieces use 500 to 800 pounds per acre.

Planting is usually and preferably in the spring during April or early May.

Certified Astoria Bent. This strain of Bent Grass was discovered and developed in the vicinity of Astoria. This is a fine leafed Bent especially adapted to lawns, parks, athletic fields and golf courses. Does well on practically all types of soils. This particular strain of Bent should be used for fine lawns and may also be used in lawn grass mixtures.

Certified Seaside Bent. Discovered and developed in the vicinity of Coquille, Oregon. This is a surface creeping bent. Adapted to putting greens and golf courses, and makes a desirable addition to lawn grass mixtures.

Certified Highland Bent. Discovered and developed in the Willamette Valley and Southern Oregon. A vigorous underground creeper similar in its growing habits and requirements to that of Astoria Bent and is especially adapted to heavy cold soils.

Pacific Bent. This is a grade of Bent that usually consists of a mixture of two or more Bents the bulk being Astoria and is well adapted for lawns and parks and lawn grass mixtures.

Field Crops Planting Instructions

KIND OF SEED	Lbs. per Bu.	Sow Lbs. per Acre	Time to Sow	Depth to Sow Inches
Alfalfa—broadcast	60	18 to 22	Spring and early fall	1 to 1½
Alfalfa—drilled	60	12 to 15	Spring and early fall	1 to 1½
Artichokes, Jerusalem	50	150 to 200	March, April, May	4
Barley—drilled	48	120 to 150	March, April	1 to 1½
Beet, Mangel Stock	30	6 to 8	April, May, June	1
Beans, Navy, Field (Small)	60	25 to 30	May, June, July	1
Beans, Great Northern (Large Navy)	60	40 to 60	May, June, July	1
Bermuda Grass	40	4 to 6	March to May	½
Black Medic	60	18 to 20	Feb., March, April	½
Blue Grass, Kentucky, for lawns	14*	125	Early spring, early Sept.	½
Blue Grass, Kentucky, for pastures	14*	20 to 30	Early spring, early Sept.	½
Glue Grass, Canada, for lawns	14*	125	Early spring, early Sept.	½
Blue Grass, Canada, for pasture	14*	20	Early spring, early Sept.	½
Brome Grass	14*	20	Spring	1½ to 2
Broom Corn	48	5 to 8	April, May	1 to 1½
Buckwheat	52	50 to 60	Late spring	1 to 1½
Clover, Alsike	60	4 to 5	Winter to April	½ to 1
Clover, Alsike—in mixture	60	2 to 4	Winter to April	½ to 1
Clover, Alsike and Timothy, mixed		8 to 10	Winter to April	
Clover, Burr	12	30 to 40	Aug., Sept., Oct.	½
Clover, Crimson	60	12 to 15	July to October	½ to 1
Clover, Hop	60	10 to 12	Feb., Mar., April, Sept.	¼
Clover, Mammoth	60	6 to 10	Winter, early April	½ to 1
Clover, Mammoth, in mixture	60			
Clover, Red	60	6 to 10	Winter, early April	½ to 1
Clover, Red, in mixture	60			
Clover, Sweet, white or yellow	60	12 to 15	March to August	½ to 1
Clover, Sweet, white (unhulled)	30	25 to 30		
Clover, White Dutch	60	6 to 8	March to April	½ to 1
Corn	56	8 to 10	Late spring	1 to 1½
Corn, for Silage	56	14 to 20	Late spring	1 to 1½
Cotton Seed	32	32	April, May, June	¾ to 1
Crotalaria	40	12 to 15	April, May, June	¾
Dallas Grass	10	8 to 10	March, April, May	½
Egyptian Wheat, Shallu	50	10 to 12	May, June, July	1½ to 2
Fescue, Meadow	24*	20 to 30	Early spring, Aug., Sept.	½
Fescue, other varieties	14*	28 to 35	Early spring, Aug., Sept.	½
Hegari	50	8 to 10	April, May, June	1½
Johnson Grass	28	20 to 30	April to July	1
Kaffir—Milo—Feterita—Grohoma, (drill)	56	10 to 15	May, June	1 to 1½
Kaffir—Milo—Feterita—Grohoma, (broadcast)	56	40 to 50	May, June	1 to 1½
Kale, Thousand Headed	50	4 to 5	Mar., Apr., May, Aug., Sept.	½
Lawn Grass, mixed		125	Early spring, early fall	½
Lespedeza—Common	25	25 to 30	Early spring after frost	1 to 2
Lespedeza—Kobe	25	25 to 25	Early spring after frost	1 to 2
Lespedeza—Korean	25	20 to 25	Early spring after frost	1 to 2
Lespedeza—Sericea	60	25 to 30	Early spring after frost	1 to 2
Millets—for Hay	50	30	Late May to early July	½ to 1
Millets—for Seed	50	15	Late May to early July	½ to 1
Millets, Hungarian, for Hay	48	48	Late May to early July	½ to 1
Millets, Hungarian, for Seed	48	30	Late May to early July	½ to 1
Millets—Japanese	35	20 to 30	Late May to early July	½ to 1
Mung Beans	60	8 to 10	May, June, July	½ to 1
Oats	32	60 to 80	March, April	1 to 1½
Orchard Grass—for Hay	14*	21 to 28	Early spring, fall	½ to 1
Orchard Grass—for Seed	14*	10 to 14	Early spring, fall	½ to 1
Pasture Mixtures		30 to 40	Early spring, fall	½ to 1
Peanuts	22	35 to 40	May, June	2
Peas, Austrian Winter	60	30 to 35	Aug., Sept., Oct.	2
Peas, Canada Field, (broadcast)	60	120 to 150	Early spring	1 to 2
Peas, Canada Field, with oats	60	75 to 90	Early spring	
Peas, Cow, broadcast	60	75 to 90	May or June	1 to 2
Peas, Cow, drilled	60	25	May or June	1 to 2
Peas, Cow, in drill with corn	60	20 to 30	May or June	1 to 2
Rape, broadcast	50	5 to 8	Early May to late July	½ to 1½
Rape, drilled	50	4 to 5	Early May to late July	½ to 1½
Red Top, Solid Seed	14*	6 to 8	April or early Sept.	½
Red Top, Unhulled	14*	20 to 25	April or early Sept.	½
Rye, Grain	56	84 to 112	Sept. to Nov.	1 to 1½
Rye, Grass	24	28 to 35	April or early Sept.	½
Sagrain	50	8 to 10	Apr., May, June, July	1
Sorghum Forage, broadcast	50	40 to 50	May, June	1 to 1½
Sorghum Forage, drilled	50	8 to 10	May, June	1 to 1½
Sorghum Syrup	50	8 to 10	May, June	1 to 1½
Sorghum, grain varieties, broadcast	56	40 to 50	May, June	1 to 1½
Sorghum, grain varieties, drilled	56	10 to 15	May, June	1 to 1½
Soy Beans, broadcast	60	75 to 120	May, June	1 to 2
Soy Beans, drilled	60	25	May, June	1 to 2
Soy Beans, in drilled with corn	60	15 to 20	May, June	1 to 2
Sudan Grass, broadcast	40	20 to 30	Late May to early July	½ to 1
Sudan Grass, drilled	40	10 to 15	Late May to early July	½ to 1
Sunflower	32	6 to 8	May	1 to 2
Timothy	45	8 to 10	Spring and fall	½
Velvet Beans	60	15 to 30	May, June	3 to 4
Vetch, Winter or Hairy	60	40 to 60	June to Sept.	1 to 2
Vetch, Spring	60	40 to 60	March or April	1 to 2
Wheat, Winter	60	75 to 90	Sept. to Nov.	1 to 1½

* NOTE.—Weights per bushel for certain grasses are old standards. Good recleaned seed is usually heavier.

KEEP IN MIND THESE SIMPLE FACTS WHEN BUYING SPRAY MATERIALS

The gardener's medicine chest is amazingly simple compared with the catalog of human remedies. Little is known about controlling plant diseases, and the weapons we use against insects have been in most cases used since horticulture began. The newest insecticide is a vegetable extract whose secret was obtained from a tribe of savages.

If the gardener who is confused about sprays and dusts studies these simple facts we have listed in this article it will enable him to have sufficient knowledge of the insecticide field to meet most problems of pest control. However, it is advisable to consult your local seed dealer before making any purchases.

Sprays, dusts and soil repellents may be divided into four general classes.

1. Fungicides—which may be useless to kill insects, but are used to destroy fungi, mildews and similar conditions most of which are usually referred to as plant diseases.

2. Contact Poisons—which kill insects with which they come in contact when they are being dusted or sprayed on plants.

3. Stomach Poisons—which remain on leaf tissues and poison insects which eat the leaves.

4. Soil Repellents—which control soil pests and other pests that live under the soil during the day and come out and feed at night.

Fungicides

Fungicides are used against various rusts, wilts, and similar diseases which attack trees, shrubs, and garden plants. Bordeaux Mixture is the most widely used in the garden. It is composed of quicklime and copper sulphate. Dusting sulphur, similar to flowers of sulphur, but more finely ground, has come into favor for black spot on roses, and garden mildews. The newest fungicide is really an old one, corrosive sublimate or mercuric chloride. It is the base of most preparations used to cure brown patch on Bent grass. Calomel, the old-fashioned household remedy, which is a mercury compound somewhat similar, is used for the same purposes, and sold under various trade names. Lime-sulphur is used as a fungicide on fruit trees, and does double duty as a contact insecticide to kill scale insects, and in dilute form to kill red spider in the summer. All of the above are obtainable from your local dealer under various trade names.

Contact Insecticides

Contact insecticides are usually prepared from nicotine, pyrethrum, rotenone, or soluble oil, which will make an emulsion with water. Sulphur and lime-sulphur are used chiefly against scale insects and red spider. Nicotine sulphate is a deadly poison to animals, and most effective against aphids (plant lice). The newest contact materials in sprays and dusts, are prepared from vegetable materials which kill insects, while doing no harm to animals. They are the powdered leaves of a wild species of pyrethrum, and rotenone, the extract of derris root, which savages use to kill fish. Both substances are offered in various dusts and sprays under trade names, the materials being old-time remedies, but offered in new forms. Rotenone, like nicotine, has the advantage of being a stomach poison as well as a contact poison.

Stomach Poisons

Arsenic is the base of most insecticides used to kill insects which eat leaf tissues. As arsenate of lead, it remains on the leaves after spraying for the longest time. For dusting in the garden Calcium Arsenate is preferred by many. Paris Green is used in some cases, though much less than in former years. Arsenic must always be applied with caution, and whenever it is applied to portions of a plant which are subsequently eaten, it should be thoroughly washed away.

Soil Repellents

The best known and most easily used soil repellent is crude Naphthalene Flakes. It is worked into the soil at the time of planting seed, bulbs or setting out plants. When contacted by the moisture of the soil it slowly gives off a gas that either kills or repels Wire Worms, Maggots, Snails, Moles and many other pests. This material should be applied at the time of planting.

Instructions Must be Followed Carefully

Trade names of all these preparations cannot be given in this article, but the information provided is sufficient to make it easy for farm and "kitchen" gardeners to know just what type of material to purchase for the control of insects. All trade preparations have on their labels sufficient information to identify the class they belong to and the materials used in their preparation. It is far better for gardeners to purchase standard manufactured materials from your local dealer than to attempt to mix "special" remedies many times suggested by magazine editors and garden book authors.

It is important that the directions for the use of each preparation shall be carefully studied and followed exactly. The success of the remedy may depend on the manner in which it is applied.

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20M—38-2

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PORTLAND SEED COMPANY

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INSTRUCTIONS FOR ORDERING, ETC.

PARCEL POST SHIPMENTS: For points beyond the 4th Zone include additional postage.

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Do not request C. O. D. shipments as expense of collection is too high. Send money order covering the amount of the order wherever possible as banks charge for collecting personal checks.

Stamps are acceptable for any amount less than $1.00.

Use the order blank and return envelope. Be sure that your name and full address are filled in and that your remittance comes with the order.

Observing these instructions will expedite the filling of your orders promptly and give us less cause for making mistakes.

PORTLAND SEED CO.'S GUARANTEE

Diamond Quality Seeds, bulbs and nursery stocks are guaranteed as to vitality and purity, but we give no warranty, express or implied, as to description or productiveness, neither will we be held responsible for the crop nor liable for more than the amount paid us for the seeds, bulbs or nursery stock should they fail to grow, we to replace or refund at our option.

Quantity	ARTICLE	$	c

CONTINUE ORDER ON OTHER SIDE

Quantity	AMOUNT BROUGHT FORWARD	$	c

Quantity	AMOUNT BROUGHT FORWARD	$	c

20M—38-1

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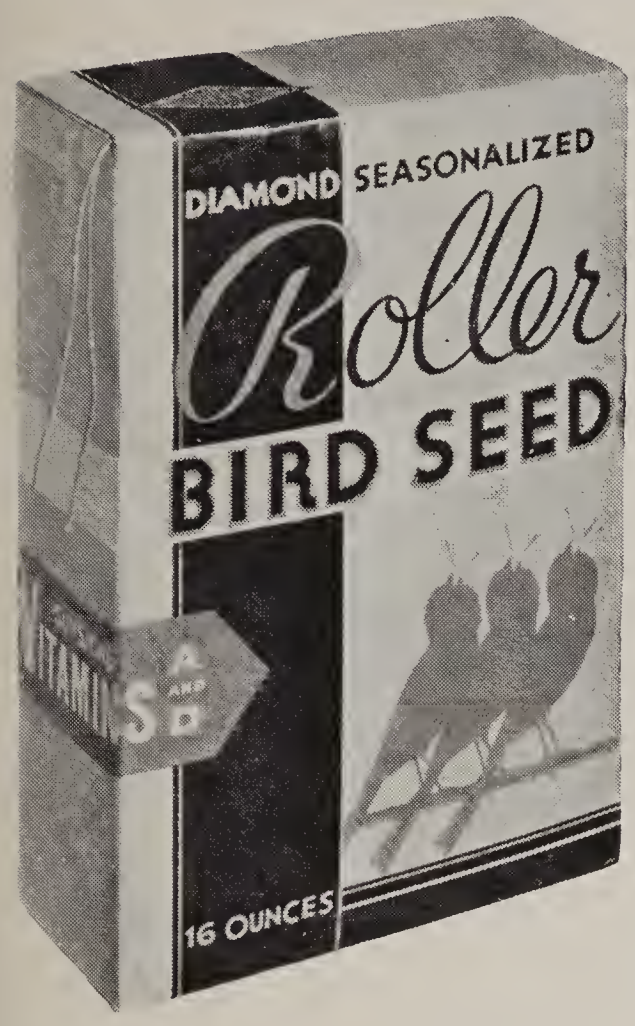
Quantity	ARTICLE	$	c

CONTINUE ORDER ON OTHER SIDE

• Diamond Roller Bird Seed



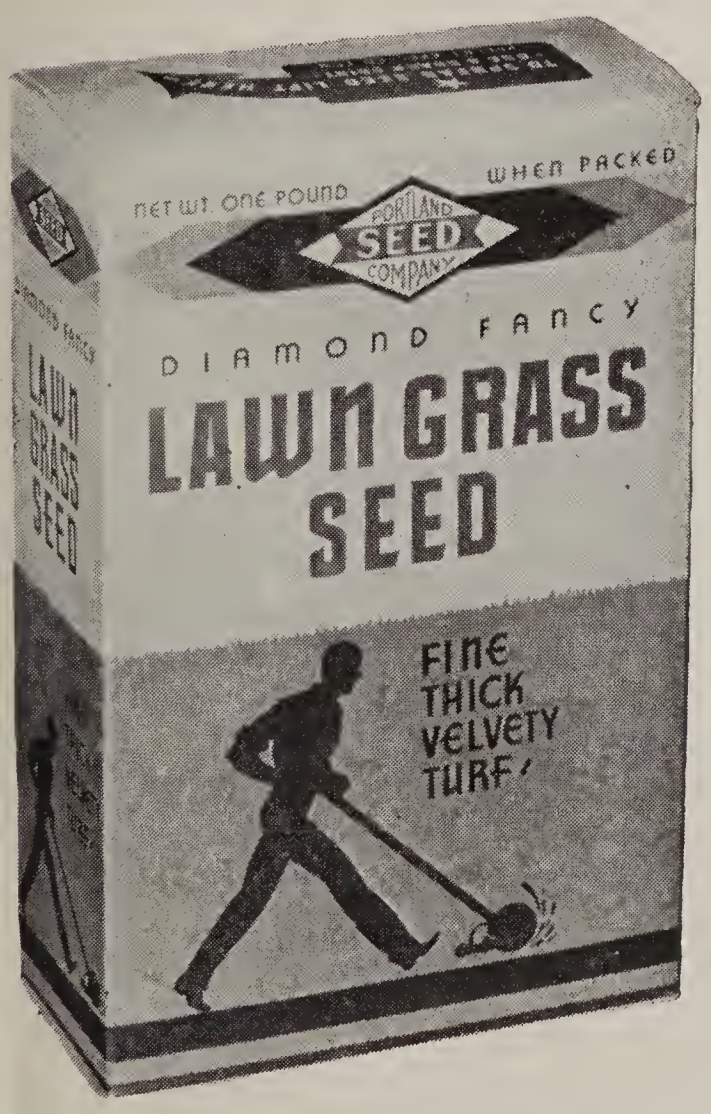
• America's only "Seasonalized" bird seed. Diamond Roller is a mixture of eight varieties of seed, carefully blended so as to assure perfect health for your canary.

• We change the formula with the seasons, which helps greatly in keeping your bird in full song at all times.

• Concentrated Cod Liver oil is added to give the much needed Vitamins A and D (sunshine vitamins). A full 16-ounce package for 20c at all better grocery, feed and pet stores everywhere.

"IT'S SEASONALIZED"

• Diamond Fancy Lawn Grass Seed



• A mixture of choice grasses, blended especially for western conditions. Making a fine, thick, velvety turf, this mixture will give you a beautiful lawn that will withstand an unusual amount of wear.

• Diamond Fancy is available in two varieties, with and without Bent seed. The standard mixture contains Kentucky Blue Grass, Chewings Fescue, Poa Trivialis and Red Top. The Bent mixture contains enough Bent seed to eventually give you a complete Bent Lawn.

• Your local seed dealer can supply you with either of these two splendid mixtures. When buying grass mixtures be sure to find out what the mixture contains. Cheap grasses are very poor economy.

"FOR A BETTER LAWN"

For Better Results Plant Diamond Lawn Grass Seed

DIAMOND FANCY LAWN SEED: This mixture is made up of four types of lawn seed. 56% Kentucky Blue Grass, 24% Chewings Fescue, 10% Poa Trivialis and 10% Red Top. An excellent blend for a thick, velvety turf that will stand hard wear.

1 lb. 50c 5 lbs. $2.40 10 lbs. $4.50 25 lbs. $10.00

These prices are F.O.B., add for postage or freight.

DIAMOND FANCY LAWN WITH BENT: If a Bent lawn is desired it is advisable to plant this mixture as it has enough Bent grass to eventually predominate the other grasses. 30% Bent grass, 45% Kentucky Blue Grass, 15% Chewings Fescue and 10% Poa Trivialis.

1 lb. 65c 5 lbs. $3.15 10 lbs. $6.00 25 lbs. $13.75

These prices are F.O.B., add for postage or freight.

DIAMOND SHADY LAWN MIXTURE: This mixture is blended especially for semi-shady and shady locations. It is a little more coarse than the other two mixtures, however, has a nice green appearance.

1 lb. 60c 5 lbs. $2.90 10 lbs. $5.50 25 lbs. $12.00

These prices are F.O.B., add for postage or freight.

GRASS SEED FOR YOUR OWN MIXTURE: Prices are F.O.B., add for shipping.

Kentucky Blue Grass - -	1 lb. 45c	5 lbs. $2.15	10 lbs. $4.00
White Dutch Clover - -	1 lb. 50c	5 lbs. $2.35	10 lbs. $4.50
Chewings Fescue - - -	1 lb. 60c	5 lbs. $2.90	10 lbs. $5.50
Astoria Bent - - - - -	1 lb. 95c	5 lbs. $4.65	10 lbs. $9.00
Pacific Bent - - - - -	1 lb. 90c	5 lbs. $4.35	10 lbs. $8.50
Poa Trivialis - - - - -	1 lb. 55c	5 lbs. $2.65	10 lbs. $5.00
Red Top - - - - - -	1 lb. 35c	5 lbs. $1.65	10 lbs. $3.00

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GENERAL OFFICE, PORTLAND, OREGON